Océ CS 5050/5070

User Manual

Océ-Technologies B.V.

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Code number 7136553
Edition 1.0 July 1999

US

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Chapter 1
Introduction

The Océ CS 5050/5070 are wide-format colour printers that give professional quality output with all the brilliance and gloss of liquid ink. The Océ CS 5050/5070 printers reduce production time while maintaining exceptional graphics quality.

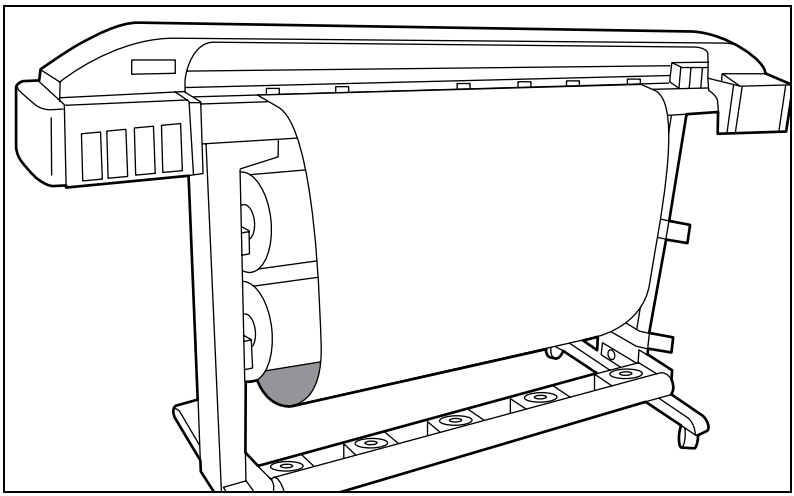
Printing with Océ CS 5050/5070

The Océ CS 5050/5070 wide format inkjet printers can reproduce graphics up to the length of a roll of media. Large format colour printing combines the technical sophistication of the Océ CS 5050/5070 series with the unique qualities of Océ proprietary inks and media (coated canvas, vinyl, film, paper, etc.)

Graphic reproductions

The Océ CS 5050/5070 addresses the following printing needs:

- Posters
- Banners
- DTP
- Packaging prototypes
- Signs
- Displays
- Imposition proofing
- Point of purchase
- Fine art
- Proofing
- Textile design
- Exhibits



[1] Rear view Océ CS 5050/5070 printer

Ease of use

Continuous-feeding ink system The printers use 500 ml reservoirs for each colour to ensure an adequate ink supply for a big print job. You simply check the transparent plastic reservoirs and refill them as necessary prior to printing. In addition, the printer's dual ink system speeds up the process of switching between different types of ink.

Acceptance of raster-oriented data in HP RTL format In this mode, printing begins immediately after the printer receives the first complete line of HP RTL data. Depending on the software used, it is possible to reproduce millions of colours, yielding high-quality results for full colour images or 3-dimensional renderings.

Choice of appropriate inks and media

Océ inks and media are developed specifically to work together to achieve the widest colour gamut available for high colour fidelity. For details about the appropriate types of media for different print jobs, see 'Media for Océ CS 5050/5070 printers' on page 112.

Obtaining quality reproductions

Depending on the print mode you use, inkjet printing can produce a wide variety of print qualities. Hence, before starting a print job, it is essential that you understand what will be the required output quality, based on the future use of the reproduced graphic, as well as the time and cost involved in achieving that required print quality.

Several factors can affect the quality of reproduced graphics. Use the following guidelines to obtain the optimal print quality with the Océ CS 5050/5070.

Choice of print mode

There are several modes of printing, which are compromises between image quality and speed. When printing heavy renderings, maps, or art graphics, choose one of the quality printing modes. Certain types of media also require quality printing modes.

To select the appropriate printing mode for a specific print job, refer to ‘Selecting quality modes’ on page 44.

Original image type

The type of original image influences the quality of the final print.

- The best image type is an original transparency (not a duplicate) with extremely crisp edge definition.
- Print film photos are not quite as good, because they are one level removed from the original film. Also, due to the emulsion process of photo prints, edge definitions tend to be lost.
- Colour prints must be of very good quality to produce acceptable scaled prints.
- Some digital photo files may be unacceptable for large format printing as they only contain a small fraction of the information contained in a film transparency.

- CD images in TIFF or EPS format of 28MB or more are preferable for high quality prints. Avoid compressed image files such as GIF or JPEG, since these files can lose valuable data after compression. However, if you must use a compressed file, take in account the following:

- Choose the JPEG format in case some quality loss is acceptable (The compression factor determines the final image quality.)
- Choose LZW if quality loss is not acceptable.

Note: *When using LZW, the compression factor will be very low on photo-images.*

Original image clarity and colour

The quality of the original transparency, photograph, or digital file determines the input as well as output clarity and colour of the image. By using a good, clear original, you can maintain the image quality throughout the printing process.

- An out-of-focus photograph will result in a fuzzy inkjet print despite after-effects sharpening corrections.
- Variations in film, speed, grain, or developing process can affect the lightness or darkness of the image for which colour corrections cannot compensate.

Scanner type

It is essential to understand the required (output) print quality of an image, and to use the appropriate scanner to scan that image into a digital file. Use a scanner that can achieve enough colour fidelity and edge clarity to meet the overall print requirement. An image scanned using a low performance scanner will lose detail, clarity, and colour.

Scan resolution

Choosing the right resolution for the output print size (and thus the amount of scaling needed after scanning) determines the best scan resolution for each image. A resolution that is too low will diminish the print quality (not enough

details). A resolution that is too high slows down the raster image processor (OGSL) without adding quality to the image.

Use the following guidelines to set end resolution:

- 150 dpi for sharp, detailed images for up-close viewing
- 100 dpi for viewing from a significant distance
- Keep text and logos as vector information (i. e. postscript fonts and formats), which will always print at the printer's resolution.

Most scanners can interpolate or "imitate" high resolution scanning. However, do not use the interpolated resolution of your scanner to compute the image size. Instead, use the scanner's highest true optical resolution to maintain image quality.

Post-scanning image correction and sharpening

Before printing a scanned image, you must perform some basic image corrections and sharpening to ensure a high quality, wide colour format print.

Tonal correction To determine the black and white points, and if necessary, remove the colour cast from the midtones of an image, use a function such as "Auto" levels in PhotoShop. This function allows you to re-adjust the black and white points in the image, and redistribute proportionately the intermediate colours. In most cases, this correction is sufficient for properly exposed images. However, in very dark night scenes or in very white snow backgrounds, you must make a manual correction by adjusting the histogram.

Sharpening To improve the edge details of an image, use the "Unsharp Mask filter" from Photoshop. This can re-focus digitally an image that has become blurry from scanning or interpolation. A small over-estimation of the filter effect can be diffused in the printing process; however, a large over-estimation can give the image a hard, pixelated appearance.

Ink cartridge preparation and alignment

Cartridge maintenance and alignment are key factors in printer performance, which in turn affects colour accuracy and image quality. Use the following recommendations to keep your cartridges in optimal working condition:

- Keep the printer wiping stations clean so that the heads stay clean.
- Align and check cartridges to make sure all nozzles work properly.
- Use a loupe to evaluate the registration of test patterns to achieve the best possible accuracy.
- Re-align all cartridges when you adjust, move, or replace a cartridge, since even small, one-pixel errors can affect both colour and image quality.

Chapter 2
Getting started

This section explains the initial installation of the Océ CS 5050/5070:

- *using the control panel*
- *loading media*
- *filling ink reservoirs*
- *installing, priming, and calibrating ink cartridges*
- *calibrating the colour deadband and the paper axis*

Using the control panel

Before printing, make sure that you are familiar with the start-up checklist and the main menu functions of the control panel.

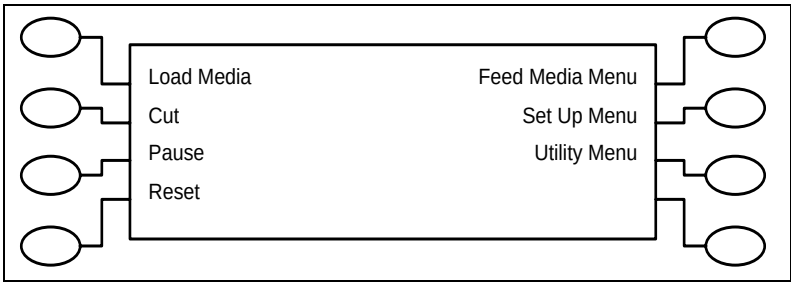
Start up checklist

To start the CS 5050/5070, check the following:

- The power cord is plugged into the electrical outlet.
- The printer connects to your computer using a parallel cable.
- Turn on the printer before attempting to print.

Locating the control panel

You can locate the control panel on the right-hand side of the printer. It includes eight buttons and a display indicating modes and settings, as illustrated below. For a complete summary of all printer options, see ‘Main menu at a glance’ on page 40.



[2] Océ CS 5050/5070 control panel

Accessing the menu functions

There are two types of menus:

- **action menus** provide a list of additional menus or immediate tasks to perform.
- **selection menus** let you view and modify printer settings.

▼ **To select menu functions**

1. To select a function, press the button displayed next to the function. The display lists options available for the selected function.
2. Press the **Next Option** or **Prev. Option** buttons to display the selections.
3. When the selection you want displays, press the button for that option and press **OK**.
4. Depending on the type of menu, you can return to the previous menu level by pressing the **OK** or **Exit** button.
5. Press **Exit** consecutively to return to the main menu.
6. Press the **Cancel** button to restore the previous setting and exit the menu.

Setting the language

The Océ CS 5050/5070 can display menu items in English, German, French, Italian, Portuguese, Korean, Japanese, and simplified and traditional Chinese.

▼ **To set a language**

1. Press **Setup**/**User settings**/**Language**.
2. Select the language you want.
3. Press **OK**.

Loading media

You can use either roll media or cut sheets. By default, the printer accepts roll media. To ensure straight paper loading and avoid skewing, hold the media parallel to the platen line. Use the load lines on the platen as a guide. The printer has sensors which detect the presence of media and activate the feed and take-up mechanisms.

The roll media core must have an inside diameter of 5 cm and a maximum outside diameter of 15 cm. If your media has an inside diameter of 8 cm, use the core adapter provided. If you want to store prints on the take-up roll, you will need to have extra cores available.

Caution: *The Océ CS 5050/5070 printers (60” version) can use media up to 60" (1,52 m) wide. The media roll can be heavy, so have someone help you to load it. Before printing, check that you have a take-up roll core available that is the same width as the media roll you are loading.*

Attention: *If your roll media has wrinkled or damaged edges, cut off the damaged part of the roll prior to loading to prevent the media from jamming in the printer. Load only media with a perfectly horizontal edge into the printer. Take care that your fingerprints do not go on the printing side of glossy media paper.*

Using the power media feed and take-up system

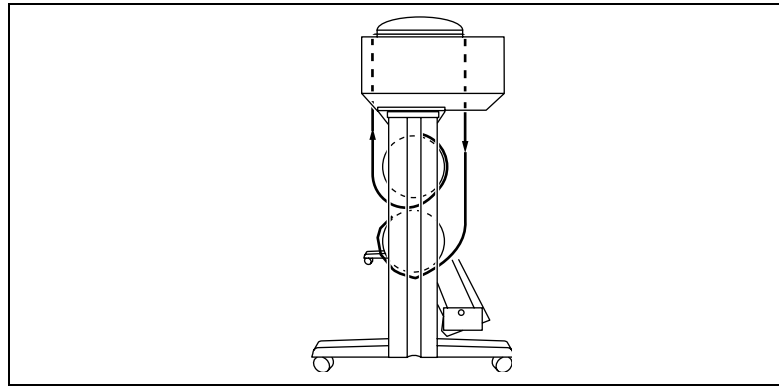
The power media feed and take-up system facilitates long, unattended print jobs by automatically unwinding and rewinding media as prints are generated. It includes a feed roll, a take-up roll, and sensors which prevent media from touching the floor.

When the unit is first turned on, the feeder may turn for a few seconds. If the take-up turns, it indicates that the sensor is blocked. Clear anything blocking the sensor before proceeding.

Loading roll media

▼ **To load roll media**

1. Slide the rolled media onto the media (upper) roller, orienting the paper as shown.
2. Slide the media guide into the roll core, and tighten the guide to secure the roll by turning the knob clockwise.
3. Standing behind the printer, insert the media's leading edge into the back of the printer. The printer automatically detects the presence of the media and forwards it.
4. Press **Load Media** to move the media into printing position.



[3] Loading media

Using the take-up roll

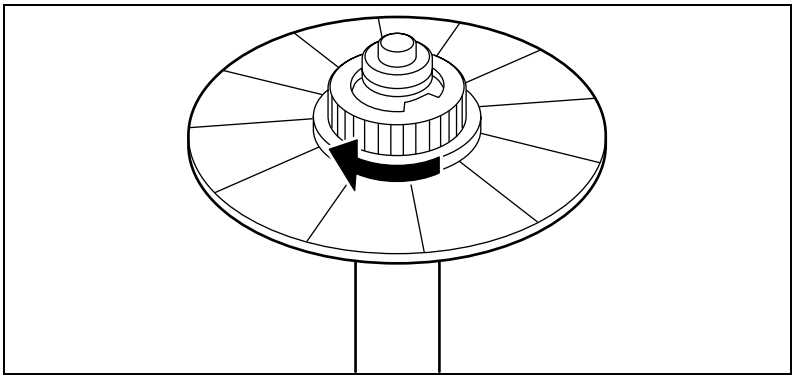
The take-up roll facilitates unattended print jobs by automatically winding printed media onto a core. In this mode, the automatic cutter is disabled. When using this option, be sure that the media sensor on the printer's right leg is not blocked.

▼ **To install the take-up roll**

1. Install an empty core onto the take-up guides. Be sure that the core width matches the width of the media you are using.
2. Slide the roll guide onto the media core, and secure it by tightening the locking mechanism. If you moved the sensor mounting bracket before loading the roll media, be sure to return it to its normal position.

3 Since media cores can be narrower than the media, position the media guide at 3 mm (1/8”) from the end of the core and lock it into place.

4 Press **Feed Media**/**Forward** to advance enough media to allow its leading edge to come to the center of the take-up roll.

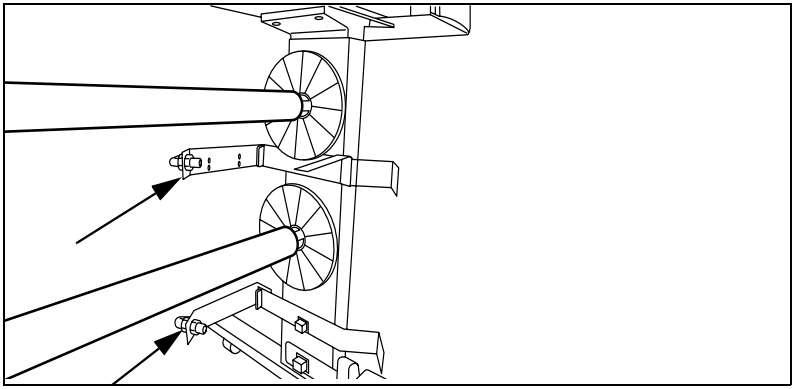


[4] Locking the fftake-up roll

5 Using at least three pieces of tape, attach the leading edge of the media to the take-up roll at the left, right, and center of the core.

6 As printing progresses, the media loops down to the front of the take-up core until the sensor detects it on the printer stand leg. The take-up rolls then activate to roll the media.

Note: *Be sure not to block the sensor!*



[5] Sensors on the printer stand

▼ **To set the take-up mode**

1 Press **Setup** /**Paper Option**, then **Supply Type**/**Take-up**.

2 Press **OK**. This enables the take-up roll and disables the cutter.

▼ **To unload the take-up roll**

1. Press the **Cut** button to cut the media.
2. Remove the roll from the printer.
3. Release the adjustable roll guide.
4. Slide the take-up roll out of the printer.

Setting drying time

Depending on the ambient humidity, temperature, and amount of ink coverage, it is recommended to use the dryer when printing a long print (see ‘Setting the dry time’ on page 59). Position the dryer so that the fans blow on the media. Set a sufficient dry time to let the ink dry before the media rolls up to the take-up core. The number of dryers that turn on automatically depends on the width of the loaded media.

Loading sheet media

▼ **To load sheet media**

1. Press **Setup**/**Paper Options**.
2. Press **Supply Type**/**Sheet**.
3. Press **OK**.
4. Load the sheet from the back of the printer, aligning it with the alignment mark on the platen.
5. Make sure that the media is flat and under the rollers. The printer automatically senses the media's presence and forwards it until it reaches the start position on the platen.

Moving the carriage

When not in use, the cartridges remain in the service station at the right side of the printer. This device seals the inkjets to prevent them from drying out. With the power on, always use the **Utility**/**Access Cartridges** button to move the carriage away from the service station when you install, change, adjust, or clean the ink cartridges or the service station.

Installing the cutter

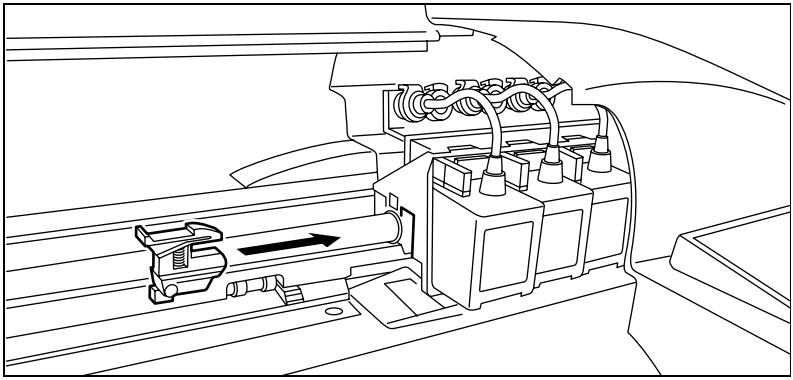
With an installed cutter, the printer cuts the media automatically after printing.

Caution: *Be careful when handling the cutter to avoid injury.*

Attention: *For normal media, do not use an external knife or cutter to cut as this can damage the platen and prevent the media sensors from working properly. However, for heavy media such as canvas, use the "Feed media" menu to advance the media through the printer before cutting with scissors.*

▼ **To install the cutter**

1. Press **Utility/Access Cartridges** to move the carriage to the left, and out of the service station. The cutter fits in the printer on the left side of the carriage.
2. Press down the lever of the old cutter to remove it from the carriage.



[6] Installing the cutter

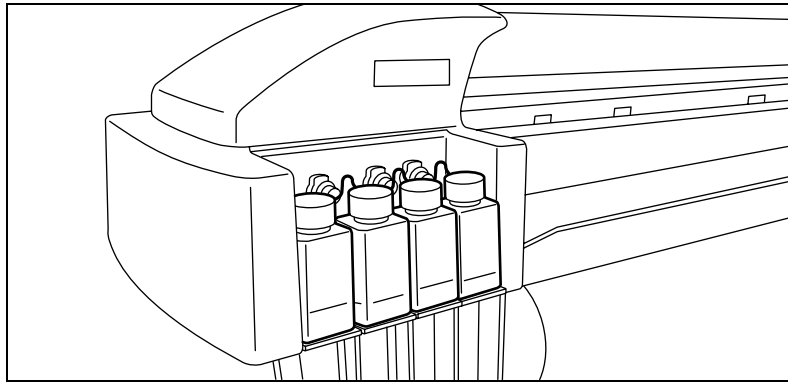
3. Push the new cutter into the slot until it clicks into place.
4. Press the **Utility/Access Cartridges** to move the carriage back into the service station. This ensures that the cutter blade is in the start/rest position.

Note: *When the cutter becomes worn, it can cause the carriage to jam or can cause a ragged media cut. In extreme cases, you might see an error message stating "Carriage Axis Failure" (see 'Carriage axis failure' on page 94).*

Filling the ink reservoirs

The Océ CS 5050/5070 can handle long, uninterrupted print jobs because each of its four reservoirs holds 500 ml of ink. The ink reservoirs are located at the printer's left side. Use Océ inks for best results.

Note: *When running at carriage speeds faster than the default, the ink levels in the reservoirs should be no more than 300 ml maximum.*



[7] Filling the ink reservoirs

Note: *To place the ink reservoirs in the right order, see the sticker on the carriage. Observe the ink order from left to right as follows: yellow, magenta, cyan, black.*

▼ **To fill the ink reservoirs**

1. Open the cover on the left side of the printer to access the ink reservoirs. Unscrew the cap of one reservoir.
   Note: *Open only one reservoir at a time to prevent contamination with other ink colours.*
2. Remove cap from the bottle.
3. Check that you are using the same type of ink in all the reservoirs and cartridges.
4. Fill the reservoir up to 375 ml, or no more than 1/2 inch from the top of the reservoir.
5. Check that there is no excess ink on the reservoir cap.
6. Replace the cap on the reservoir.

Attention: *Do not over tighten reservoir cap, in order to maintain adequate air pressure for correct ink flow to the cartridges.*

7 Repeat for the remaining reservoirs, then close the cover.

Attention: *A complete second set of connections is provided with colour-coded quick connect fittings for changing to another type of ink. Be sure that each reservoir is connected to the same colour fitting.*

Installing ink cartridges

The process of installing new ink cartridges involves the following phases:

- Placing the cartridges on the carriage
- Priming the ink delivery lines
- Printing a colour test

Attention: *The Océ CS 5050/5070 works with only Océ pre-filled ink cartridges. Using other cartridges can damage the printer and/or prevent the printer from printing.*

Placing the cartridges

When you place the cartridges, follow closely these precautions:

- Do not remove the blue tape from the cartridge until instructed to do so.
- Do not touch the jet area or the flex contact area of the cartridge.
- Work with only one colour at a time to avoid contamination.
- Check that the ink delivery lines are not twisted.

▼ **To place a cartridge**

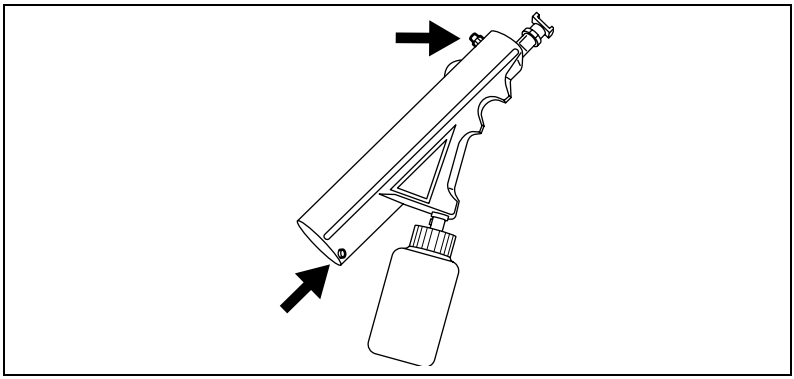
1. With the printer powered on, press **Utility/Access Cartridges** to move the carriage into position for cartridge installation or replacement.
2. The cartridges are prefilled and preprimed. Remove the cartridge from the sealed bag and remove the shipping cap.
3. Place it bottom first into the correct slot on the carriage.
   Note: *Do not remove the blue tape from the jet plate.*
4. Tilt the the cartridge up until it clicks into place. Make sure the cartridge is firmly installed.

Priming the ink delivery lines

After filling the ink reservoirs, you prime each of the four ink delivery lines to establish ink flow between the reservoirs and cartridges. You use the Océ 5350 Prime tool for this purpose. The Prime tool is a battery operated ink priming

device used to draw ink through the ink delivery lines and for priming cartridges.

You perform this procedure once the first time after you set up the printer. It is not necessary when refilling the reservoirs or replacing ink cartridges.

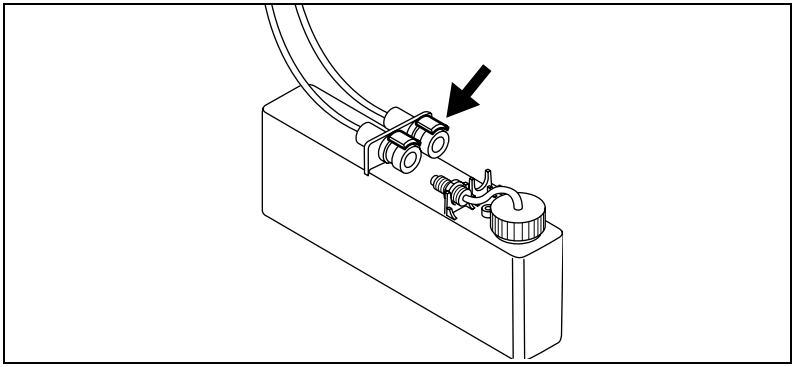


[8] Océ CS 5050/5070 Prime tool

Note: *When priming delivery lines, be sure to wipe off any excess ink from the Océ 5350 Prime tool before going on to the next colour to avoid colour contamination.*

▼ **To prime the delivery lines**

1 Fill ink reservoirs (do not exceed maximum level line). Attach reservoir to appropriate ink delivery line by depressing quick connect tab and snapping reservoir into place.

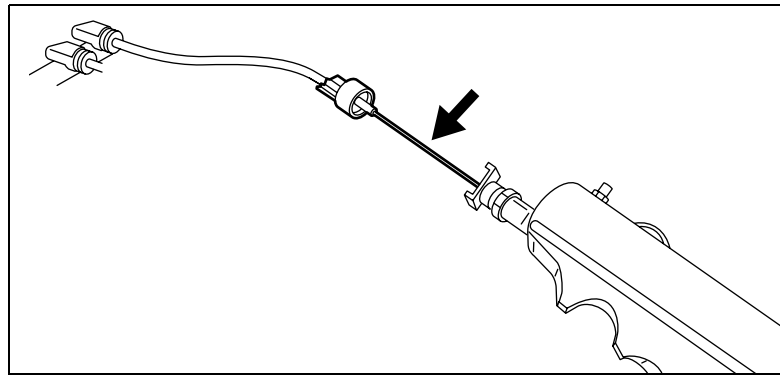


[9] Quick connect fitting

Note: *For right order to place the ink reservoirs, see sticker on carriage.*

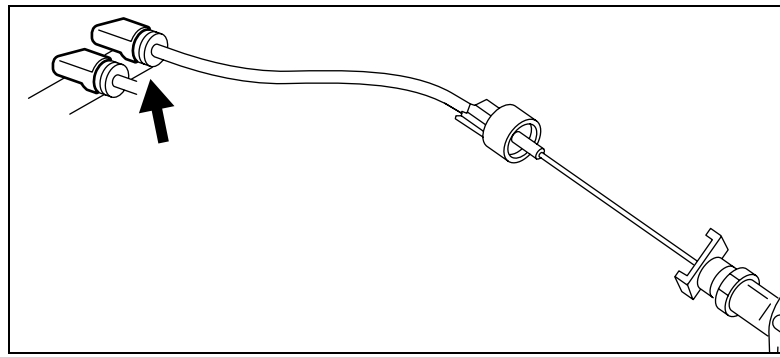
2 Obtain the Océ CS 5050/5070 Prime tool.

3 Prime each tubing/chain ink line by inserting the cartridge needle into the end of the Prime tool and press the button several times until a solid stream of ink is present throughout tubing.



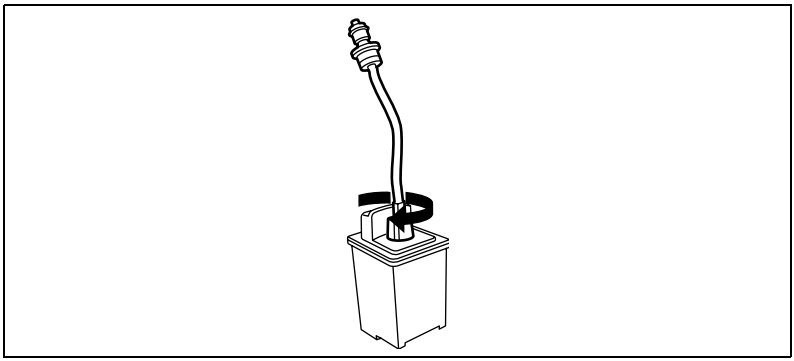
[10] Inserting the needle into the small opening of the Prime tool

4 With the other hand simultaneously press the quick connect fitting tab (blue or grey) and pull on the connect fitting to release the cartridge tube assembly from the electronics cover.



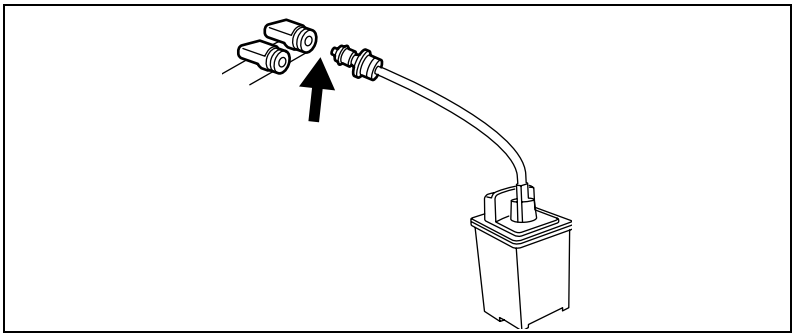
[11] Quick connect fitting tab

5 Remove cartridge needle from the Prime tool and insert into the cartridge opening and tighten clockwise securely.



[12] Removing the cartridge needle

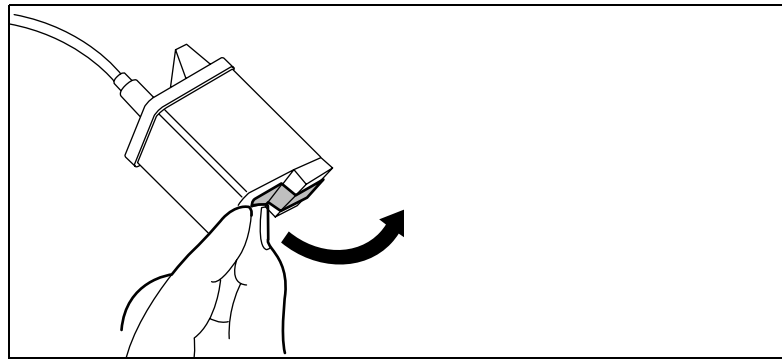
6 Re-attach cartridge tubing assembly to the quick connect fitting.



[13] .Re-attaching cartridge tubing assembly

7 Remove blue tape from the cartridge jet plate.

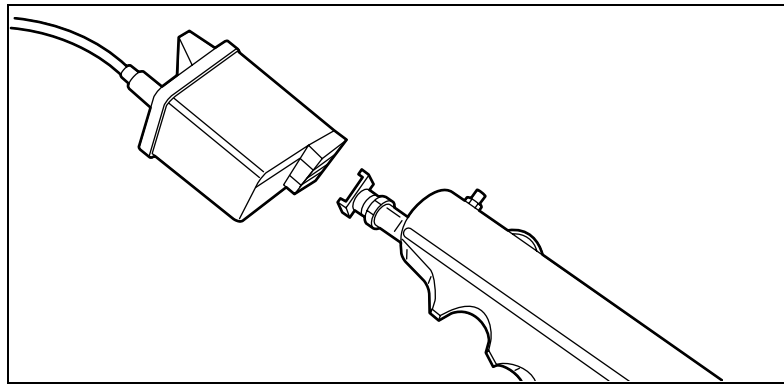
Note: *Do not raise cartridge 30 degrees above electronics cover or turn cartridge upside down during the tape removal or priming process.*



[14] Removing the blue tape from the cartridge jet plate

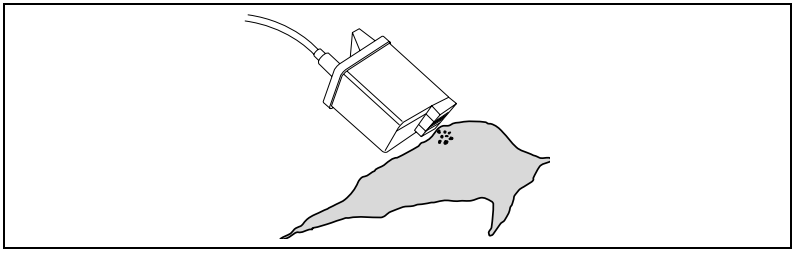
8 Attach the Prime tool to the cartridge jet plate and prime cartridge with pulses by pressing the activation button repeatedly.

Note: *A helpful method is to break the seal with the jet plate after each pulse to improve the priming success rate.*



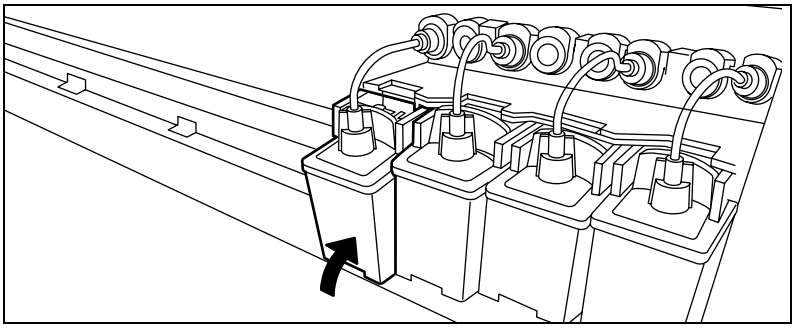
[15] Attaching the Prime tool to the cartridge jet plate

9 Blot jet plate with a lint-free towel or cloth.



[16] Blotting the jet plate

10 Insert the cartridge into the carriage, making sure it snaps into place properly.



[17] Inserting the cartridge into the carriage

Printing a colour test

An initial colour test checks for correct cartridge priming, to ensure that all colours print in a uniform and solid pattern.

▼ **To print the colour test**

1 Check that the printer has media loaded.
2 Press **Setup menu/Print Mode menu**.
3 Press **Quality mode/Photo**.
4 Select **Utility menu/Service menu/Diagnostics/Colour Test**.
5 Set the colour test percentage to 75%.
6 Press **OK**. The colour test prints.
7 Check that all colour bands print a solid pattern, indicating a correct priming of cartridges. Run the colour test again if you do not obtain a solid pattern.

Printing the prime pattern

You print the prime pattern to check that the ink cartridges fire properly and to detect any clogged or electrically defective jets.

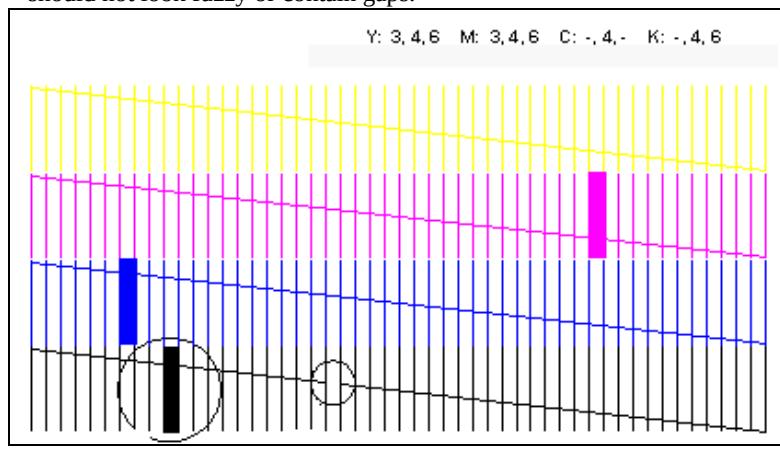
▼ **To print the prime pattern**

1. With media loaded, press **Utility** menu
2. Select **Prime**.

   A test pattern prints. The test pattern consists of four coloured bands (for black, cyan, magenta and yellow), a series of lines and a CMYK header, indicating the compensating print modes for damaged jets. (See ‘Compensating for electrically defective jets’ on page 89.)

▼ **To interpret the prime test**

- The bands should be smooth, without dark streaks or white lines. The lines should not look fuzzy or contain gaps.



[18] The upper test pattern of a prime test

- Within the printed test pattern, each jet is represented by a short horizontal line. Together, these short horizontal lines form a “stair step” pattern.
- Electrically defective jets appear as solid bars for which you can compensate.
- Clogged jets appear as gaps or misdirected lines in the “stair step” pattern, which you clear manually.
- The print modes for which compensation is available are shown above the test pattern.

- In the above example, the prime test shows that there are three electrically defective jets and one clogged jet. The header indicates that you can compensate for the electrically defective jets in the 4-pass mode. But you must clear the clogged jet manually. See ‘Clearing clogged jets’ on page 89 for further information.

Note: *If all jets appear to be defective, reinstall the cartridges.*

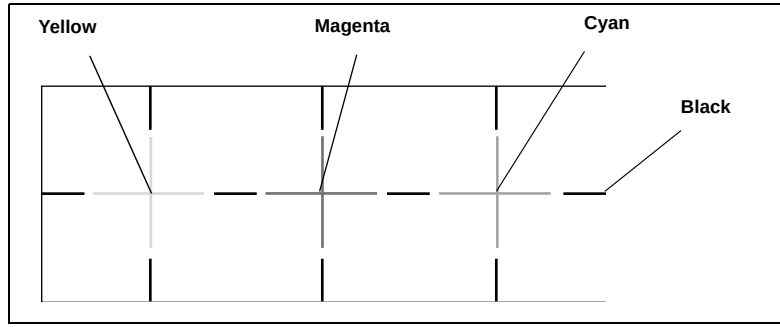
Calibrating cartridges

For best results, perform a calibration each time you install a new cartridge.

▼ **To print a colour calibration test**

■ With paper loaded, press **Utility/Colour Calibration menu/ Calib Print Test**. The printer draws a series of three patterns as follows:

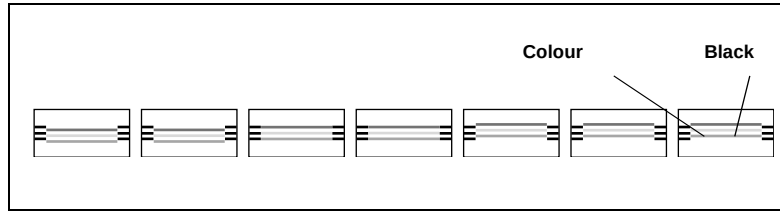
Current Heads (Y, M, C) shows yellow, magenta, and cyan "+" which represent the horizontal and vertical alignment between the cartridges.



[19] Current Heads (Y, M, C)

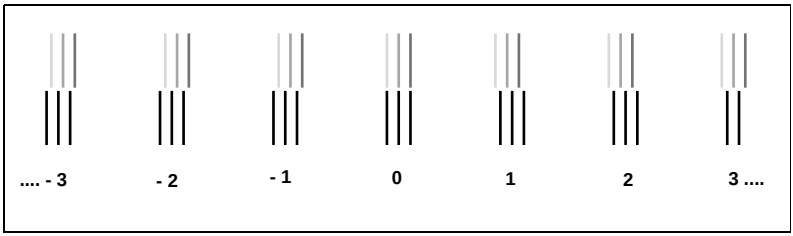
When the coloured "+" lines up horizontally and vertically with the black alignment marks, no adjustment is required.

Colour Vertical Head-To-Head Calibration checks for vertical alignment.



[20] Colour Vertical Head-to-Head Calibration

Colour Horizontal Head-To-Head Calibration checks for horizontal alignment. Three lines similar to the examples below are printed with the following colour combinations: yellow/magenta, magenta/cyan, and cyan/black.



[21] Colour Horizontal Head-to-Head Calibration

The numbers below each set of lines represent the different horizontal and vertical alignment values.

▼ **To adjust colour calibration values**

1. Examine the patterns to determine which value shows the best horizontal and vertical alignment between cartridges. These are the values you will set in the printer menu.
2. Press **Cyan -Vertical**.
3. Enter the value which represents the best alignment for cyan vertical.
4. Press **OK**.
5. Repeat for Magenta and Yellow vertical.
6. Repeat procedure for Cyan, Magenta, and Yellow horizontal.

Defining calibration units

You can set the calibration units to English or Metric.

▼ **To set calibration units**

1. Select **Setup/User Setup/Units Select**.
2. Choose **English** or **Metric**.

Cartridge recognition

The Océ CS 5050/5070 printer is designed to use only Océ CS 5050/5070 cartridges. To avoid potential damage to the printer, a **cartridge recognition** feature checks for properly installed Océ cartridges. This function activates when the printer receives a print request (i.e., image data, prime, etc.).

If the system detects a problem, the error message “Unrecognized Cartridge(s)” displays on the control panel, and the printer beeps three (3) times. You must clear this error before the printer can proceed with the print job.

▼ **To clear cartridge recognition error**

1. Press **Access Cartridges** to move the carriage to the correct position for replacement of the ink cartridges.
2. Check that there are four installed Océ cartridges.
3. Replace any invalid cartridge.
4. Press **OK**.

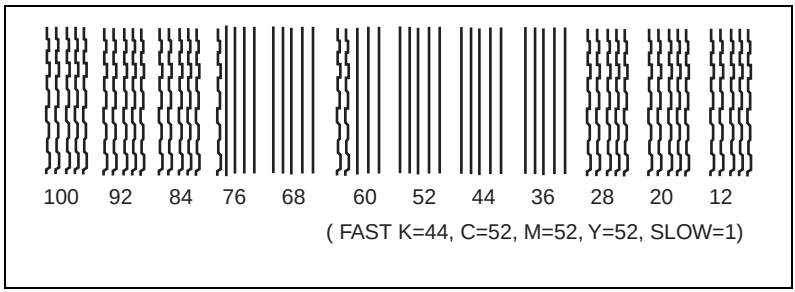
Note: *This error can also occur with incorrectly installed Océ cartridges, due to poor electrical connections between the cartridge and the carriage unit.*

Calibrating the colour deadband

When printing in bidirectional mode, the velocity of the carriage can cause certain dots to miss the target area on the media. To alleviate this problem, use the **colour deadband compensation** feature to fine-tune dot placement. The colour deadband test pattern lets you check the velocity deadband values and adjust them for best printing results.

▼ **To print the colour deadband test pattern**

1. Press **Setup/Utility.**
2. Select **Calibration/Colour Db test**. The following pattern prints out:



[22] Colour deadband test pattern

3. For each colour, examine the vertical lines and select the set of straightest lines. Note the compensation number at the bottom of the set of lines you have selected.
4. Compare with the existing compensation values printed in the lower right corner of the test pattern. If any of these differ from the values you selected, enter the new compensation values by pressing the button corresponding to the colour deadband you want to change.
5. Use the **Next** and **Previous option** buttons to scroll to the desired compensation value.

Calibrating the paper axis

External factors such as room temperature, storage temperature, and humidity can have a deforming effect on media. A paper axis calibration corrects for minor paper length fluctuations, which you carry out using a precision ruler of at least 33 (838.2 mm) inches long.

▼ **To print the paper axis test**

1. Load the media that you want to use. Check that the length is at least 36 (91 cm) inches long.
2. Press **Utility/Calibration/Paper Axis Test**. The printer prints two marks.
3. Remove the media from the printer and measure the distance between the witness marks. The distance between the marks should be exactly 838.2 mm (33.00 ”).
4. If the distance between the marks is different from that shown on the display, press **Paper Axis** to enter the value of the distance you have just measured.
   ■ Press **OK**.

Note: *The OGSL software can convert units from inches to metric, and vice versa. See your software documentation for instructions.*

Operating the printer

While the printer prints, you can stop it momentarily and then resume printing, or cancel a print.

▼ **To pause the printer while printing**

1. Press **Pause**.
2. Press it again to resume printing.
   Note: *Banding might occur.*

▼ **To cancel a print**

- Cancel the print job from the computer using the appropriate command for your software application.

▼ **To clear the buffer after canceling a print**

- Press **Reset**.

Chapter 3
Printing options

This section explains the available printing options:

- *Menu functions*
- *Default printer settings*
- *Print modes*
- *Media standards and options*
- *Saving user options*

Main menu at a glance

Main menu	Menu options	Next options (in italics) or function
Load media		Moves media into/away from platen
Cut		Cuts media
Pause		Stops print job temporarily
Reset		Clears print buffer after job cancellation
Feed Media	Forward	Advances media to the front of printer
	Media counter	Tracks the length of media remaining on a roll
	Display counter	Shows and prints the length of media remaining on a roll
	Backward	Moves media to the back of printer
	End of media	Detects when media no longer advances through the printer
Setup	Print mode	*Colour mode, Quality mode, Dots per inch, Print passes, Carriage speed, Print direction, Exit*
	Paper options	*Supply type, Media standard, Margins, Auto-load delay, Auto-cut, Save media, Auto-wipe, Exit*
	User setup	*Select user, Save user, Unit select, Language, Init. settings, Print settings, LCD contrast, Exit*
	Ink option	*Ink reduction, Ink preheat, Dryer, Dry time, Exit*
	Serial comm	*Baud rate, Data bits, Parity bits, Exit*
	HPGL/2 menu	*Palette select, Control, Rotation, Nesting menu, Reprints, Ink limit, Exit*
	Exit.	Returns to the main menu
Utility	Prime	Prints the prime pattern
	Access cartridge	Moves carriage away from service station
	Display settings	Displays information such as paper width and height, on time, cumulative plot time
	Print settings	Prints information about media size, firmware version, RAM size, plot hours
	Colour Calib menu	Prints the colour calibration test pattern values, sets the colour values determined by the test pattern.
	Calibration menu	*Use Calib XY, Paper axis test, Colour Db menu, Open jet menu, Paper axis*
	Service menu (diagnostics used by technical support)	*Calibration, Diagnostics, About, Cartridge Information*

Using the default settings

The following table shows the factory default printer settings. You can print these settings for reference.

▼ To print settings

- Press **Setup/User** and **Setup/Print Settings** to get a listing of current settings. Be sure to have paper loaded before you start.

▼ To return to factory default settings

- Press **Setup/User Setup/Init** Settings buttons. All saved user settings return to default settings.

User Settings	Default	Other options
COLOR MODE	Colour	Mono, Gray
QUALITY MODE	Photo	Draft, Quality, User, Production
DOTS PER INCH	600	300
PRINT PASSES	4	1, 2, 3, 4, 8, 10
CARRIAGE SPEED	10	1-10
PRINT DIRECTION	Bi	Uni
AUTO-LOAD DELAY	6	1-12 seconds
MEDIA STANDARD	All	US ENGR, US ARCH, ISO A, M_DIN. GRAPHICS, MET OVER A, ISO B, SPECIAL
MARGIN	Normal	Expanded
AUTO CUT	ON	OFF
SAVE MEDIA	ON	OFF
AUTO WIPE	ON	OFF
CALIB XY	ON	OFF
SELECT USER	1	1 TO 8
SAVE USER	1	1 TO 8

User Settings	Default	Other options
UNITS SELECT	English	Metric
LANGUAGE	English	German, French, Italian, Spanish, Portuguese, Japanese, Chinese, Korean
INK PREHEAT	2	OFF, 1-7
INK REDUCTION	0	12.5 %, 25%, 37.5%, 50%
DRYER	OFF	ON
DRY TIME	0	0:10, 0:20, ... 60.:00
BAUD RATE	9600	19200, 38400
PARITY BIT	None	Even, odd

System settings	Default	Other options
SUPPLY TYPE	Roll (5050) Take-up (5070)	Sheet
LCD CONTRAST	8	1-16

Calibration settings	Default	Other options
DEADBAND	44	0 120
SLOW DEADBAND	0	-2 ... +2
CYAN VERTICAL	0	-9 ... +9
MAGENTA VERTICAL	0	-9 ... +9
YELLOW VERTICAL	0	-9 ... +9
CYAN HORIZONTAL	0	-9 ... +9
MAGENTA HORIZONTAL	0	-9 ... +9
YELLOW HORIZONTAL	0	-9 ... +9
PAPER AXIS	33.00	32 - 34

Choosing print mode options

Your printer offers several print modes to compromise between speed and quality.

The print mode choice depends on factors such as software application, colour vs. monochrome printing, and media type. Each print mode directly affects the printing speed and the quality of the printed image. The following print modes options are available:

- Colour modes
- Print quality modes
- Print passes
- Carriage speed
- Print direction
- DPI mode

The following table summarizes the default print mode settings. It is not necessary to set all the parameters, unless you want to create a user-defined print mode.

Mode	DPI	Uni or bi-directional	Passes	Carriage speed
DRAFT	600 x 600	BI	1	10
PRODUCTION	600 x 600	BI	2	10
QUALITY	600 x 600	BI	3	10
PHOTO	600 x 600	BI	4	10
USER	600 x 600	User-defined via the control panel		

Selecting resolution (dpi)

Select your image resolution based on the viewing distance and user specifications. This resolution is not the same resolution as in the resulting rasterised file created with OGSL. For best results, check that the printer resolution (dpi) matches the image resolution of the file you are printing.

Note: *Even though a rasterized image at 600 dpi is four times larger than the same image at 300 dpi, the printing speed does not change (if other settings are the same.) The printer always prints at 600 dpi, even if the print mode menu setting displays 300 dpi. This setting refers to the resolution at which your image was created, and not the actual resolution at which it prints.*

Note: *OGSL automatically corrects for images with different input resolutions.*

RIP resolution	Printer dpi setting	Result of printed output image	
300 dpi	300 dpi	1 input pixel prints as 4 output pixels.	The printed image is the size of the original.
300 dpi	600 dpi	1 input pixel prints as 1 output pixels.	The printed image is 1/4 the original size.
600 dpi	300 dpi	1 input pixel prints as 1 output pixels.	The printed image is 4x the original size.
600 dpi	600 dpi	1 input pixel prints as 1 output pixels.	The printed image is the size of the original.

▼ **To choose resolution**

1 Press **Setup menu/Print mode menu/Dots per inch**.
2 Select **300** or **600** resolution.

Selecting a colour mode

Colour mode gives you the option of printing in colour or monochrome.

▼ **To choose a colour mode**

1 Press **Setup/Print Mode/Colour Mode**.
2 Choose **Colour** or **Mono**.
3 Press **OK**.

Selecting quality modes

You can select five print quality modes, depending on the type of image you are printing (i.e. lineart or photographs).

Draft A single-pass mode that optimizes printing speed over quality. Useful as a check for position, layout, colour, etc., but not for finished quality images.

Production A two-pass mode that gives fast, average quality prints on bond paper. Use it for line drawings or images with small areas of fill and large areas of white space.

Note: Draft *and* **Production** *modes are suitable for line drawings (CAD). These modes are not recommended for printing images, because bleeding may occur in areas of heavy fill or dark shading.*

Quality A three-pass mode that gives fast, better than average quality prints on paper media.

Photo A four-pass mode that optimizes quality over printing speed, used for high quality continuous tone images.

User-defined This option lets you select the number of print passes, the print direction, and the carriage speed.

Note: *Use multi-pass modes for continuous tone images, blends, and solid fills. Because these modes split inking into three or four passes, it reduces print anomalies such as banding (stripes through fills) and over-inking. However, it takes longer to print. Experiment with different modes to pick the best one for your needs.*

▼ **To choose print quality**

1. Press **Setup/Print Mode/Quality Mode**.
2. Choose the print quality.
3. Press **OK**.

Setting the number of print passes

The number of passes indicates how many times the cartridges must fire to lay down the ink for a complete scan line. When you choose multiple passes, the jets fire a fraction of the dots on each pass. The result is less ink every single pass. If you're printing an image with heavy fill or shading, setting the print mode to an option that lays down less ink (e.g., four pass) can help prevent running and bleeding.

The 10-pass print mode can handle difficult print jobs that involve high contrast solid fills and blends. This mode can give higher output quality from older cartridges, hence extending the life of your cartridges.

▼ **To change the number of passes**

1. Choose **Setup/Print Mode/Print Passes**.
2. Choose **single**, **two**, **three**, **four**, **six, eight,** or **ten** passes.
3. Press **OK**.

Setting the carriage speed

The carriage speed determines the number of dots that print (per second) as the carriage moves over the media.

▼ **To set the carriage speed**

1. Press **Setup/Print Mode/Carriage speed.**
2. Choose the speed from **1** to **10**.
3. Press **OK**.

Selecting the print direction

The print direction determines whether the inkjets fire on both passes of the carriage over the print area (bidirectional), or simply on the return pass (unidirectional).

- **Unidirectional** printing can reduce running and ink bleeding if you have an image with solid fills and blends.
- **Bidirectional** printing can decrease your printing time if printer speed is more important.

▼ **To change the print direction**

1. Press **Setup/Print Mode/Print Direction**.
2. Choose **Unidirectional** or **Bidirectional**.
3. Press **OK**.

When printing in bidirectional mode, the velocity of the carriage can cause certain dots to miss the target area on the media. To alleviate this problem, use the **colour deadband compensation** feature to fine-tune dot placement. The colour deadband test pattern lets you check the velocity deadband values and

adjust them for best printing results (see ‘To print the colour deadband test pattern’ on page 36).

Choosing "feed media" options

The printer's "Feed media" options allow you to:

- set the "end of media" detection
- use the media counter to estimate the remaining media length

Detecting the "end of media"

When the media jams or does not unroll properly from the feeder roll, it cannot advance through the printer. Yet the carriage sensor still detects the presence of media, and printing progresses. This damages the print job because the printer continues to lay down ink on the same portion of media.

The "End of media/Feeder stop" option can limit the damage in these cases. When the printer detects an abnormally long absence of the media loop between the feeder roll and the platen, it automatically enters the "pause" mode, as if you had manually pressed "Pause" on the control panel menu.

The printer beeps 3 times every 20 seconds, and remains in the "pause" mode until you either:

- manually press "Pause" to resume printing ("Pause" is a toggle function)
- manually press "Reset" to abort printing . Abort the print job from the software application as well.

When you use this setting, keep in mind the following principles:

- This setting does not work with cut sheets as the selected media
- This setting is a machine setting and therefore activates each time you switch on the printer, until you manually turn it off from the control panel menu
- You cannot store this setting as a user setting
- You cannot change this setting once printing begins
- When you manually press "Pause" to resume printing, the "Feeder stop" detection disables for the remainder of the print
- When activated, the "Feeder stop" detection restarts at the beginning of each print

▼ **To set the "Feeder stop"**

1 Press **Feed Media**/**End of Media**.
2 Choose **Feeder Stop**.
3 Press **OK**.

Using the media counter

The media counter gives you a means of "estimating" the length of media left on a roll.

- When you install a new roll (or used roll of media with a known length), you enter the length in the media counter on the control panel.
- As the printer uses up the media, this value decreases and displays on the control panel.
- When you remove the media roll, you can print the estimated remaining length on the roll, and enter this value in the media counter the next time you use this roll.

▼ **To enter a media length value**

1 Press **Feed Media**/**Media counter.**
2 Enter the media length.
3 Press **OK**.

▼ **To display the media length value**

1 Press **Feed Media**/**Display counter.** The current value appears.
2 Press **Exit.**

▼ **To print the media length value on the roll**

1 Press **Feed Media**/**Display counter.**
2 Press **Print counter.**
3 Press **Exit.**

▼ **To reset the media counter to 0**

1 Press **Feed Media**/**Media counter.**
2 Press **Reset counter.**
3 Press **OK**.

When you use this setting, keep in mind the following principles:

- Reset the media counter to 0 to avoid confusion when not in use
- The media counter does not decrease below 0

- This setting is a machine setting and therefore activates each time you switch on the printer, until you manually turn it off from the control panel menu
- You cannot store this setting as a user setting

Choosing paper options

The following paper options are available:

- Supply Type
- Save Media
- Auto-Wipe
- Margins
- Auto-Load Delay
- Auto-Cut

Media standards

When you print an image, you determine its size from the software aplication. Check that you have loaded the media that is wide enough to accomodate the image size because the printer automatically defines the print area based on the width of the loaded media. If length is a problem, use roll media. If the media width is smaller than the images size, the image may be truncated.

▼ **To choose the media standard**

1. Press **Setup/Paper Option/Media Standard**.
2. Choose the size of media you are loading.
3. Press **OK**.

Rollfeed media: sizes and maximum printing areas

Paper size		Normal Print Area	Expanded Print Area
Graphic (U.S. Offset)			
A	8.5” x 11.0”	7.3” x 9.8”	8.1” x 10.6”
B	11.0” x 17.0”	9.8” x 15.8”	10.6” x 16.6”
C	17.0” x 22.0”	15.8” x 20.8”	16.6” x 21.6”
	19.0” x 25.0”	17.8” x 23.0”	17.6” x 24.6”
	20.0” x 28.0”	18.8” x 26.0”	18.6” x 27.6”
	22.0” x 26.0”	20.8” x 24.0”	20.6” x 25.6”
D	22.0” x 34.0”	20.8” x 32.8”	21.6” x 33.6”
	23.0” x 35.0”	21.8” x 33.0”	21.6” x 34.6”
	24.0” x 29.0”	22.8” x 27.0”	22.6” x 28.6”
	25.0” x 38.0”	23.8” x 36.0”	23.6” x 37.6”
	32.0” x 44.0”	30.8” x 42.0”	30.6” x 43.6”
E	34.0” x 44.0”	32.8” x 42.8”	33.6” x 43.6”
	35.0” x 45.0”	33.8” x 43.0”	33.6” x 44.6”
	36.0” x 45.0”	34.8” x 43.0”	34.6” x 44.6”
	40.0” x 50.0”	38.8” x 48.0”	38.6” x 49.6”
	48.0” x 65.0”	46.8” x 63.0”	46.6” x 64.6”
	50.0” x 65.0”	48.8” x 63.0”	48.6” x 64.6”
	54.0" x 65.0"	52.8" x 62.4"	53.6" x 62.8"
	60.0" x 65.0"	58.8" x 62.4"	59.6" x 62.8"
U.S. Architectural			
A	9.0” x 12.0”	7.8” x 10.8”	8.6” x 11.6”
B	12.0” x 18.0”	10.8” x 16.8”	11.6” x 17.6”
C	18.0” x 24.0”	16.8” x 22.8”	17.6” x 23.6”
D	24.0” x 36.0”	22.8” x 34.8”	23.6” x 35.6”
E	36.0” x 48.0”	34.8” x 46.8”	35.6” x 47.6”
U.S. Engineering			
A	8.6” x 11.0”	7.3” x 9.8”	8.1” x 10.6”
B	11.0” x 17.0”	9.8” x 15.8”	11.6” x 16.6”
C	17.0” x 22.0”	15.8” x 20.8”	16.6” x 21.6”
D	22.0” x 34.0”	20.8” x 32.8”	21.6” x 33.6”

Paper size		Normal Print Area	Expanded Print Area
E	34.0” x 44.0”	32.8” x 42.8”	33.6” x 3.6”
ISO-A			
A4	210 x 297 mm	180 x 267 mm	200 x 287 mm
A3	297 x 420 mm	267 x 390 mm	287 x 410 mm
A2	420 x 594 mm	390 x 564 mm	410 x 584 mm
A1	594 x 840 mm 625 x 880 mm	564 x 810 mm 595 x 815 mm	584 x 830 mm 615 x 825 mm
A0	841 x 1189 mm	811 x 1159 mm	831 x 1179 mm
METRIC-DIN			
A4	250 x 337 mm	220 x 307 mm	240 x 327 mm
A3	337 x 460 mm	307 x 430 mm	327 x 450 mm
A2	460 x 634 mm 610 x 860 mm	430 x 604 mm 580 x 795 mm	450 x 624 mm 600 x 805 mm
A1	634 x 881 mm 860 x 1220 mm	604 x 851 mm 830 x 1155 mm	624 x 871 mm 850 x 1165 mm
A0	881 x 1229 mm 1000 x 1414 mm 1189 x 1682 mm	851 x 1199 mm 970 x 1349 mm 1158 x 1617 mm	871 x 1219 mm 990 x 1359 mm 1179 x 1627 mm
ISO-B			
B3	250 x 353 mm	220 x 288 mm	240 x 298 mm
B3	353 x 500 mm	323 x 470 mm	343 x 490 mm
B2	500 x 707 mm	470 x 677 mm	490 x 697 mm
B1	707 x 1000 mm	677 x 970 mm	697 x 890 mm

Sheet media: sizes and maximum printing areas

Paper size		Normal Print Area	Expanded Print Area
Graphic (U.S. Offset)			
A	8.5” x 11.0”	7.3” x 9.0”	8.1” x 9.4”
B	11.0” x 17.0”	9.8” x 15.0”	10.6” x 15.4”
C	17.0” x 22.0”	15.8” x 20.0”	16.6” x 20.4”
	19.0” x 25.0”	17.8” x 23.0”	18.6” x 23.6”
	20.0” x 28.0”	18.8” x 26.0”	19.6” x 26.6”
	22.0” x 26.0”	20.8” x 24.0”	21.6” x 24.6”
D	22.0” x 34.0”	20.8” x 32.0”	21.6” x 32.4”
	23.0” x 35.0”	21.8” x 33.0”	22.6” x 33.6”
	24.0” x 29.0”	22.8” x 27.0”	23.6” x 27.6”
	25.0” x 38.0”	23.8” x 36.0”	24.6” x 36.6”
	32.0” x 44.0”	30.8” x 42.0”	31.6” x 42.6”
E	34.0” x 44.0”	32.8” x 42.0”	33.6” x 42.4”
	35.0” x 45.0”	33.8” x 43.0”	34.6” x 43.6”
	36.0” x 45.0”	34.8” x 43.0”	35.6” x 43.6”
	40.0” x 50.0”	38.8” x 48.0”	49.6” x 48.6”
	48.0” x 65.0”	46.8” x 63.0”	47.6” x 63.6”
	50.0” x 65.0”	48.8” x 63.0”	49.6” x 63.6”
U.S. Architectural			
A	9” x 12.0”	7.8” x 10.0”	8.6” x 10.4”
B	12.0” x 18.0”	10.8” x 16.0”	11.6” x 16.4”
C	18.0” x 24.0”	16.8” x 22.0”	17.5” x 22.4”
D	24.0” x 36.0”	22.8” x 34.0”	23.6” x 34.4”
E	36.0” x 48.0”	34.8” x 46.0”	33.6” x 46.6”
U.S. Engineering			
A	8.5” x 11.0”	7.3” x 9.8”	8.1” x 9.4”
B	11.0” x 17.0”	9.8” x 15.0”	10.6” x 15.4”
C	17.0” x 22.0”	15.8” x 20.0”	16.6” x 20.4”
D	22.0” x 34.0”	20.8” x 32.0”	21.6” x 32.4”
E	34.0” x 44.0”	32.8” x 42.0”	”33.6” x 42.4”

Paper size		Normal Print Area	Expanded Print Area
ISO-A			
A4	210 x 297 mm	180 x 247 mm	200 x 257 mm
A3	297 x 420 mm	267 x 370 mm	287 x 380 mm
A2	420 x 594 mm	390 x 544 mm	410 x 554 mm
A1	594 x 840 mm	564 x 791 mm	564 x 801 mm
A0	841 x 1189 mm	811 x 1139 mm	831 x 1149 mm
METRIC-DIN			
A4	250 x 337 mm	220 x 287 mm	240 x 297 mm
A3	337 x 460 mm	307 x 410 mm	327 x 420 mm
A2	460 x 634 mm	430 x 580 mm	450 x 694 mm
A1	634 x 881 mm	604 x 831 mm	624 x 841 mm
A0	881 x 1229 mm	851 x 1179 mm	871 x 1189 mm
ISO-B			
B3	353 x 500 mm	323 x 450 mm	343 x 460 mm
B2	500 x 707 mm	470 x 657 mm	490 x 667 mm
B1	707 x 1000 mm	677 x 950 mm	697 x 960 mm

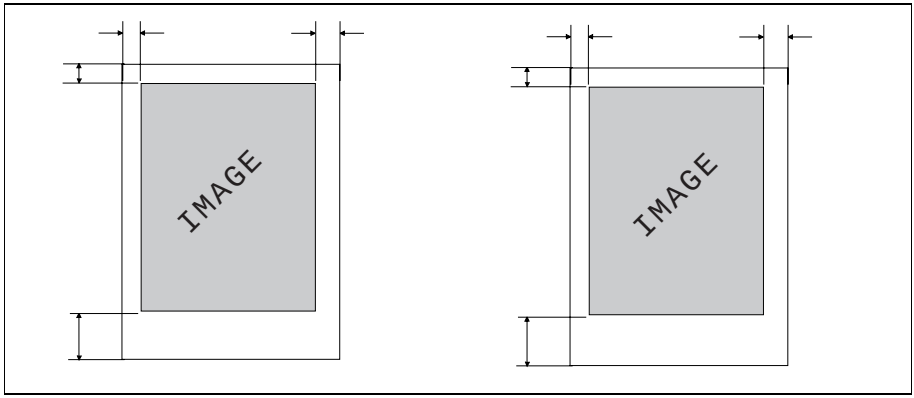
Setting margins

You can set margins to **Normal** or **Expanded**. Any part of the image that extends outside the margin will be clipped.

The **Expanded** setting enlarges the print area and decreases the margins.When using this setting, check that you align the media accurately using the guide on the right of the platen so that the ink doesn't exceed the edge of the media.

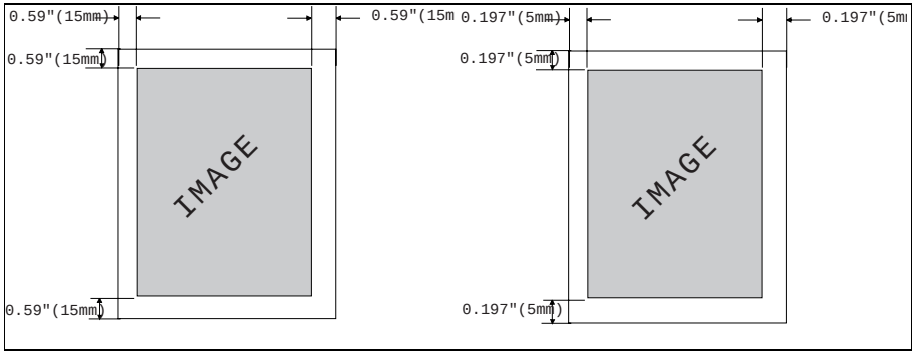
The following tables give the margin sizes for cut sheet and roll feed media:

Cut sheet media	On three sides	Fourth (bottom) side
Normal	15 mm (0.6")	35 mm (1.4")
Expanded	5 mm (0.2")	35 mm (1.4")



[23] Cut sheet normal margins and expanded margins

Rollfeed media	All sides
Normal	15 mm (0.6”)
Expanded	5 mm (0.2”)



[24] Roll sheet normal margins and expanded margins

▼ **To set margins**

1. Press **Setup/Paper Option/Margins**.
2. Choose **Normal** or **Expanded**.
3. Press **OK**.

Setting auto-load delay

Auto-load delay is the time lapse between the moment the printer senses the presence of the media and when it actually starts feeding the media. This gives you time to reposition manually the media if necessary. The default is 6 seconds, selectable from a range of 1-12 seconds.

▼ **To set auto-load delay**

1. Press **Setup/Paper Option/Auto-load delay.**
2. Choose the delay time.
3. Press **OK**.

Note: *Only stored in memory in combination with a user-defined setting.*

Selecting auto-cut

With the **Auto-cut** option activated (by default), the printer automatically cuts the media when printing completes. To ensure that the image is dry before cutting, turn on the dryer and/or specify a dry time. You can also select to cut the media manually from the printer control panel at any time.

Note: *Auto-cut is disabled when the paper feed option is set to* **"take-up"**.

▼ **To set auto-cut**

1. Press **Setup/Paper Option/Auto-Cu**t.
2. Choose **On** or **Off**.
3. Press **OK**.

Saving media

With the **Save media** option activated (by default), the media advances only far enough to print the image. When not activated, the printer advances the full print area of the loaded media. For example, if a 36 inch roll is loaded, the printer advances the entire print area for a standard 36 x 48" sheet, even if the printed image is only 30 inches long.

▼ **To turn off Save Media**

1. Press **Setup/Paper Option/Save Media.**
2. Choose **Off**.
3. Press **OK**.

Selecting auto-wipe

The printer automatically wipes the cartridge jet plates periodically during printing (by default). However, you can de-activate this setting if you are having problems with banding.

Note: *Not wiping the cartridge jet plates can cause clogging of the inkjets.*

▼ **To turn off the wiper**

1. Press **Setup/Paper Option/Auto-Wipe**.
2. Choose **Off**.
3. Press **OK**.

Applying ink reduction

Ink reduction lets you reduce the percentage of ink laid down by the printer. This option applies to vector-based images only, and has no effect on continuous tone (raster) images. This is useful for images with large amounts of printed area, and limits bleeding or over-saturating of the media. However, as it changes the appearance of colours, it is recommended to run a small test print.

▼ **To apply ink reduction**

1. Press **Setup/Ink Option/Ink Reduction**.
2. Choose a reduction percentage - **12.5, 25%, 37.5, or 50%**.
3. Press **OK**.

Selecting ink preheat

Although cartridge heat settings are optimized for Océ media for printing in a standard office environment, they can vary depending the ambient temperature where the printer is located, and the type of ink and media used. Adjusting the ink preheat settings (after applying other corrective measures) can help improve problems with banding, poor fills, or over dot gain.

The default ink preheat values depend on the type of ink used, which the printer reads from the chip at the back of each cartridge. You can either increase or decrease the temperature from the default value by pressing (+) or (-) respectively. When you reach the limits of the temperature range, the panel displays **MAX** or **OFF**. The printer saves the new settings, which you must modify when changing to another type of ink.

Use the following tips to select preheat settings:

- Turn down the heat for a smaller dot size in a hot or humid environment.
- Turn up the heat in a cold or dry environment for a larger dot size. However, a too high setting can cause the ink to run of sputter.

Note: *Adjusting the preheat settings will influence the printed colours.*

▼ **To select an ink preheat setting**

1. Press **Setup/Ink Option/Ink Preheat**.
2. Choose a preheat setting.
3. Press **OK**.

Turning on the dryer

The dryer is installed at the base of the printer stand to dry the ink. When activated, the dryer fans turn on at the beginning of a print and stay on for 10 minutes unless you set a specific dry time.

▼ **To turn on the dryer**

1. Press **Setup/Ink Option/Dryer**.
2. Choose **On**.
3. Press **OK**.

Setting the dry time

Unattended prints require a drying time to prevent the ink from smearing when the image touches the takeup roll or previously printed images. Different media can require different drying time depending on the ambient temperature and humidity. Dry time values range from 10 seconds to 60 minutes. When this time expires, the printer rolls or cuts the image before printing the next image in the buffer.

▼ **To set the dry time**

1. Press **Setup/Ink Option/Dry Time**.
2. Choose a time from 10 seconds to 60 minutes.
3. Press **OK**.

Adjusting the LCD contrast

The LCD contrast option lets you adjust the brightness of the control panel (with default setting 9). The contrast values range from 1-16, with 16 as the least contrast.

▼ **To set LCD contrast**

1. Press **Setup/User Setup/LCD Contrast**.
2. Choose the contrast value.
3. Press **OK**.

Saving user options

You can save the most frequently used options to avoid reconfiguring the printer each time you print an image. You can define up to eight different configurations and save them under a user setting number ranging from 1-8. Select the desired user setting number before sending an image to the printer. You can save settings for the following options:

- Cut On or Off
- Media Standard
- Auto load delay
- Baud Rate
- Auto-Wipe On or Off
- Monochrome or Colour
- Drying Time
- Quality Mode
- Print Mode
- Margins
- Parity
- Dryer On/Off

▼ **To save user-defined settings**

1. Press **Setup/User Setup/Save User**.
2. Scroll to the number under which you want to save the user settings.
3. Press **OK**.

▼ **To use a previously saved user setting**

1. Press **Setup/User Setup/Select User**.
2. Scroll to the number of the user setting you want.
3. Press **OK**.

Chapter 4
Printing with HP-GL/2

This section explains the printing parameters generally used with vector-based files, such as palette selection, printer control, rotation, reprints, nesting, and ink limit.

Note: *HP-GL/2 and HP RTL are trademarks of the Hewlett-Packard Co. AutoCAD is a trademark of Autodesk, Inc.*

Overview

The "Draft" and "Production" modes are the most suitable printing modes for line drawings or drawings with light solid fills typically created by computer-aided design.

When printing vector data, you can either control certain options from your software application or assign the control to the printer settings. The following section explains the HP-GL/2 print settings on the Océ CS 5050/5070.

Accessing the HP-GL/2 menu options

The following menu options are available from the HP-GL/2 menu:

- Palette select
- Control
- Rotation
- Nesting menu
- Reprints
- Ink limit

▼ **To acces the HP-GL/2 menu**

- From the main menu, press **Setup menu**/**HP-GL/2 menu**.

Selecting the palette

The "Palette select" option lets you choose either the HP-GL/2 or AutoCAD palette. Each palette allows 256 colours with 8 predefined colours, as shown below:

Pen number	HP-GL/2	AutoCAD
0	White	White
1	Black	Red
2	Red	Yellow

Pen number	HP-GL/2	AutoCAD
3	Green	Green
4	Yellow	Cyan
5	Blue	Blue
6	Magenta	Magenta
7	Cyan	Black

▼ **To choose a palette**

1. From the main menu, press **Setup menu**/**HP-GL/2 menu/Palette select**.
2. Choose either HP-GL/2 or AutoCAD.
3. Press **OK**.

Setting the "Control" function

You set control to establish whether it is the software application or the printer control panel that determine certain printing functions. Control overrides the following functions in the HP-GL/2 header file:

- "Repeat Plot" (RP): when you set control to the printer, the printer will ignore RP commands in the print file and output only one print. On the control panel, you can use the "HP-GL/2/Reprints" menu to specify additional copies.
- "Enable Auto Cutter" (EC): when you set control to the printer, the printer will ignore EC commands in the print file, and does not cut automatically after each print. On the control panel, you can enable automatic cutting or initiate a command for a single cut.

Note: *Do not override software control when sending merged raster/vector data to the printer.*

▼ **To set control**

1. From the main menu, press **Setup menu**/**HP-GL/2 menu/Control**.
2. Choose either **Software** or **Printer**.
3. Press **OK**.

Rotating a print

The printer automatically prints an image with the long side on the paper axis. To fit multiple images and save media, you can use the "Rotation" (RO) function to rotate vector files counter-clockwise 90 degrees at a time.

Note: *Only HP-GL/2 files support rotation. RTL files do not support rotation.*

When you use this setting, keep in mind the following principles:

- If you specify a rotation that does not fit on the media or contains raster images, the file will not rotate.
- When you set the rotation value to "Auto", the algorithm automatically rotates the print if this will save media, whether or not you have enabled "Nesting".
- When you set the rotation value to "0", the print does not rotate.
- "Control" does not override the RO command in the print file.

▼ **To rotate a print**

1. From the main menu, press **Setup menu**/**HP-GL/2 menu/Rotation**.
2. Choose the rotation angle (0, 90, 180, 270, Auto).
3. Press **OK**.

Making reprints

You can print up to 99 copies of a specific vector file. When you set "Reprint" to 0, only one copy prints.

▼ **To make reprints**

1. From the main menu, press **Setup menu**/**HP-GL/2 menu/Reprints**.
2. Choose the number of reprints (0 to 99).
3. Press **OK**.

Nesting

The "Nesting" function can save media by printing multiple prints across the horizontal width of the media. It also reduces the time required to print multiple prints.

When you enable this function, the printer accumulates HP-GL/2 files in a "nest". Printing begins when one of the following occurs:

- The "nest" is full, when no other image can fit across the media
- The "Nesting Wait Time" is up. This is the length of time during which the printer idles and waits for the current nest to fill.
- The printer runs out of memory
- The printer receives a print file with different print settings than those in the "nest", such as:

- Print quality
- Number of passes
- Print direction
- Speed
- Colour mode
- DPI
- Dry time
- Margins
- Wipe on/off
- Media save

The following parameters do not affect nesting:

- Ink limit
- Reprints
- Automatic rotation
- Automatic cutting: if any print file in the nest has the cutter enabled, the printer cuts automatically when the nest finishes printing.

▼ **To enable nesting**

1. From the main menu, press **Setup menu**/**HP-GL/2 menu/Nesting**.
2. Choose either **On** or **Off**.
3. Press **OK**.

▼ **To set the "nesting wait time"**

1. From the main menu, press **Setup menu**/**HP-GL/2 menu/Nesting**.
2. Select the **Nest Time** menu.
3. Choose the nest time (30 seconds, 1 minute, 2 minutes)
4. Press **OK**.

Applying the ink limit

The printer can an limit the amount of ink laid down when printing polygon fills and wide vectors. This prevents bleeding when you print on inexpensive inkjet media. The default setting is "on". When you print on high quality media, turn off this setting.

▼ **To apply the ink limit**

1. From the main menu, press **Setup menu**/**HP-GL/2 menu/Ink limit**.
2. Choose **On**.
3. Press **OK**.

Printing an HP-GL/2 test file

The printer's memory contains an HP-GL/2 test file to assist in diagnosing potential problems. The printed colours in this test file are the same RGB values defined in AutoCAD. Turn off the "ink limit" setting to get AutoCAD colours on high quality media.

▼ **To print the test file**

- From the main menu, press **Utility menu**/**Service menu/Test print**.

Chapter 5
Printer maintenance and storage

The chapter describes the periodic maintenance tasks to carry out in order to maintain consistent quality printing.

Ink reservoir and cartridge maintenance

The ink maintenance tasks include:

- Refilling the ink reservoirs
- Replacing ink cartridges
- Cleaning the service station
- Changing the ink type
- Cleaning the ink cartridges
- Cleaning the carriage shaft

Refilling ink reservoirs

Keep the reservoirs (on the left side of the printer) always filled with ink. You can refill them at any time, even while printing. If a reservoir runs out of ink, the ink delivery lines will deprime and may make the ink leak, and cause damage to the ink cartridges and the carriage electronics. When refilling ink reservoirs, take these precautions:

- Have paper towels handy
- Wear disposable gloves.
- Open only one reservoir at a time to prevent an ink colour from accidentally contaminating another.

Attention: *Use of inks other than those supplied by Océ may cause damage to your printer.*

▼ **To fill ink reservoirs**

1. Open the front left printer cover to access the ink reservoirs.
2. Remove the cap from the reservoir you want to fill.
3. Check that the ink colour and type in the bottle and the one in the ink reservoir match.
4. Pour the ink into the reservoir to approximately 1/2 inch from the top. Do not overfill.
5. Replace the cap on the reservoir and close the panel.
   Note: *Do not overtighten cap in order to maintain adequate air pressure for correct ink flow to the cartridges.*

Changing ink types

When you use a new ink type (i.e. from Océ Standard Colour ink to Océ Outdoor Colour ink), you must change the reservoirs and the cartridges to match the new ink type. If you are printing with only two different types of inks using two sets of ink lines, you can use the colour coded quick connect fittings to change ink types. However, if you use only one set of ink lines for different ink types, you must purge and rinse the ink delivery lines with distilled water.

Attention: *For best results when changing inks, keep in mind these precautions:*

- **Do not** use Océ Standard Colour inks with Outdoor media or vice versa.
- **Never** mix inks.
- Use only inks developed for the Océ CS 5050/5070 printers.

When changing ink types, you must do the following:

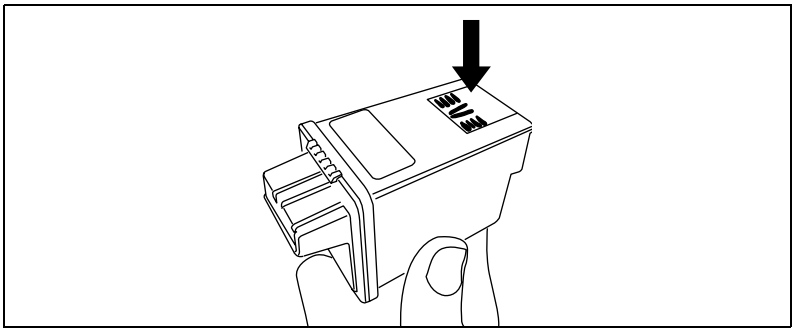
- Remove and store ink cartridges
- Remove and store ink reservoirs
- Install new ink reservoirs
- Install new ink cartridges

Removing and storing ink cartridges

▼ **To remove ink cartridges**

1. Press **Utility/Access Cartridge** to move the cartridges out of the service station.
2. Disconnect the quick connect fitting, noting the colour fitting to which it was connected.

3 Remove the cartridge from the carriage by gently pulling the top edge toward you, then lifting it out of the carriage. Leave the tube fitting attached to the cartridge to avoid leaking.



[25] Leaving the tube fitting attached to the cartridge

4 Wipe any ink from the fitting using a lint-free cloth.
5 Store the cartridge in the cartridge garage to keep it ready for future use.
6 Repeat the previous steps for the remaining cartridges.

Attention: *When setting down a cartridge filled with ink, place it on its front side with the flex contacts facing up. This prevents ink from leaking out either from the top opening or from the bottom jet area.* **Do not touch the flex contact area of the cartridge**.

Removing the reservoirs

▼ **To remove the reservoirs**

1 Remove all ink cartridges before removing the ink reservoirs.
2 Open the left front cover to access the reservoirs. Leave on the reservoirs caps.
3 Disconnect the quick connect fitting for each reservoir, noting the colour of the fitting to which it was connected.
4 Slide each reservoir forward to remove it from the printer.
5 Store the reservoirs away from direct sunlight in an environment similar to that of the printer.
6 Replace with new reservoirs.
7 Fill the reservoirs with the appropriate ink and attach to the other set of quick connect fittings (not used for the previous type of ink).

Installing new cartridges

Be sure the new cartridges you install contain the same type of ink as the reservoirs. Snap them into place and attach the quick connect fittings.

Each time you place new ink cartridges in the printer, prime and calibrate them to get the highest quality printed images.

Attention: *Do not attempt to install or remove an ink cartridge from the carriage without first selecting Utility/Access Cartridges to move the carriage away from the service station. Do not attempt to pull the carriage out of the service station manually while the printer is turned on.*

Refilling ink cartridges

New Océ cartridges are prefilled with ink. However, if you must re-install a used or empty cartridge, make sure that the ink level in the cartridge is exactly 20 ml. Any other level (above or below 20 ml) can interfere with the continuous ink refilling process to the cartridges during printing.

To refill a used cartridge with the correct level of ink, use the syringe and hose provided. The hose length of the syringe is 40 mm.

Note: *This 40 mm length guarantees the correct amount of ink when you insert the hose completely into the cartridge.*

▼ **To fill an empty cartridge**

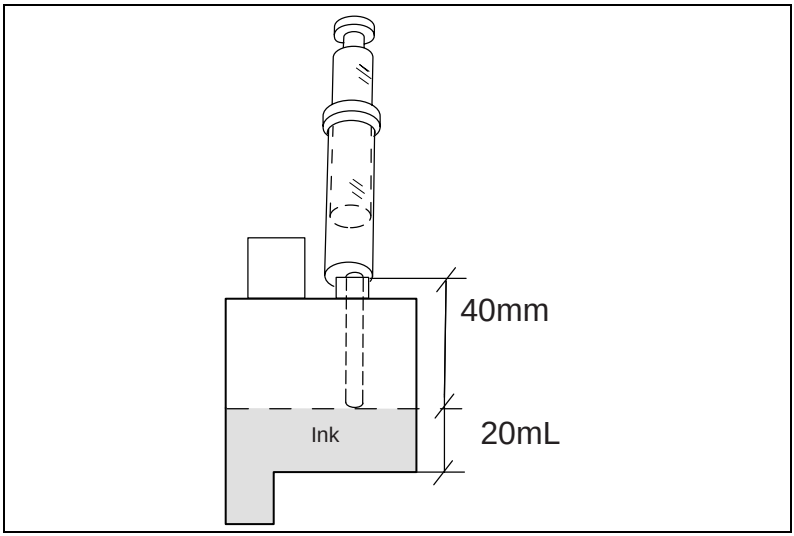
1. Fill the syringe with 20 ml of ink.
2. Attach the hose to the syringe.
3. Insert the hose into the cartridge.
4. Empty the syringe contents into the cartridge.

▼ **To draw excess ink from a cartridge**

1. Insert the hose of the empty syringe into the cartridge.
2. Draw excess ink from cartridge. The level of remaining ink is now exactly 20 ml.
3. Remove syringe.

▼ **To refill a cartridge**

1. Fill the syringe with 20 ml of ink.
2. Attach the hose to the syringe.
3. Insert the hose into the cartridge.
4. Empty the syringe contents into the cartridge.
5. Draw any excess ink from cartridge. The level of remaining ink is now exactly 20 ml.
6. Remove syringe.



[26] Refilling cartridge to correct ink level

Purging ink delivery lines

If you are using one set of ink lines for several ink types, you must purge the ink lines and rinse them with distilled water thoroughly before changing to a new ink type. You will then have to reprime the lines as described (see ‘Priming the ink delivery lines’ on page 25).

▼ **To purge ink delivery lines**

1. Remove all four cartridges before purging the ink lines.
2. Disconnect the ink delivery lines from the ink reservoirs. Carefully wipe any excess ink from each connector using a paper towel before proceeding.
3. Insert the tube that was in the cartridge into a container of distilled water.

4 Connect the Océ Prime tool to a connector at the ink reservoir and turn it on until ink stops flowing into the collection bottle.
5 Repeat the same procedure for the rest of the lines.

Periodic cleaning

For best results, Océ recommends that you clean periodically the cartridges and service station. The frequency should be daily for heavy use, and weekly for moderate use. In addition, you should wipe any areas of the printer exposed to ink and the print shaft with a lint-free cloth moistened with water.

Attention: *Do not oil the print shaft. Cleanse with a clean cloth and rubbing alcohol.*

The table gives recommendations for periodic cleaning to keep your printer in optimal working condition.

Interval	Component	Cleaning Agent
Immediately	■ Any ink spills	Distilled water
Weekly	■ Service station seals and wipers	Distilled water
Monthly	■ Slide shaft ■ Encoder strip top and bottom ■ Cartridge jet area	Isopropyl alcohol Distilled water
Semiannually	■ External areas ■ Pinch rollers and lower drive rollers	Distilled water
Annually	■ Encoder sensor	Canned air or alcohol moistened cloth
	■ Inner platen ■ Carriage	Distilled water
Other		
Cartridge change or or a prime problem	■ Cartridge dimples flex driver cables	Isopropyl alcohol

Materials to use for cleaning

- Isopropyl alcohol (industrial grade)
- Lint-free soft cloth/paper wipe
- Dry lint-free cloth
- Cotton swabs
- Ultrasonic cleaner (if available)
- Distilled/Reverse osmosis water (purified water)
- Canned/compressed air.

Cleaning the ink cartridge jet plate

You clean the ink cartridges when used in a low humidity environment or when heads get clogged and repeated priming doesn't solve the problem. In addition, cleaning may restore print quality in ink cartridges worn out from prolonged use. However, if this fails, replace the cartridge.

▼ **To clean the ink cartridge jet plate**

1. Press the **Utility/Access Cartridges** to move the carriage away from the service station.
2. Disconnect the quick connect fittings, noting the colour of the fitting to which the cartridge was connected.
3. Remove the ink cartridge from the printer by gently pulling the top of the cartridge toward you, then lifting it up out of the carriage.
4. Press lightly against the jets with a water-moistened, lint-free, non-paper cloth (do not use alcohol). Gently blot any excess ink.

   Attention: *Blot only: do not wipe. Wiping may damage the jets. (Ink will appear on the cloth; this is normal.*

5. Reinstall the cartridge in the carriage and reconnect the ink supply line.

   Attention: *Never use alcohol to clean the jet area of the cartridge.*

6. Press the **Utility/Access Cartridges** buttons to return the carriage to the service station.
7. Press the **Utility/Prime** buttons to check the cartridges. Repeat two more times, if necessary. If the cartridges fire correctly, perform the appropriate calibration procedures (see 'Calibrating cartridges' on page 33).

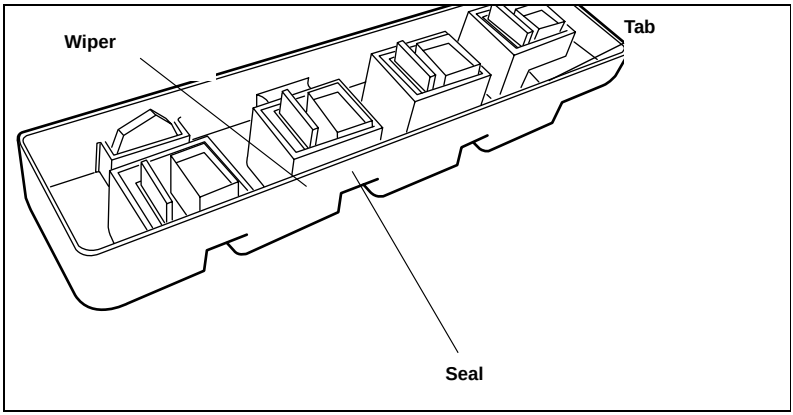
8 If the cartridge continues to misfire, remove the cartridge. Rinse the ink from the bottom of the cartridge using warm distilled water.
Note: *Removing the cartridge too often can create a large air bubble in the line,which can lead to pen problems. Refill the lines with ink if necessary.*
9 Dry all surfaces of the cartridge, except for the bottom, or jet area and the circuit plate.
10 Reinstall the cartridge and reprime.
11 Print out and check the prime test pattern.

Cleaning the service station

When ink and dust accumulate in the service station, this results in poor print quality. Depending your printing frequency, the recommendation is to clean the service station every week.

▼ **To clean the service station**

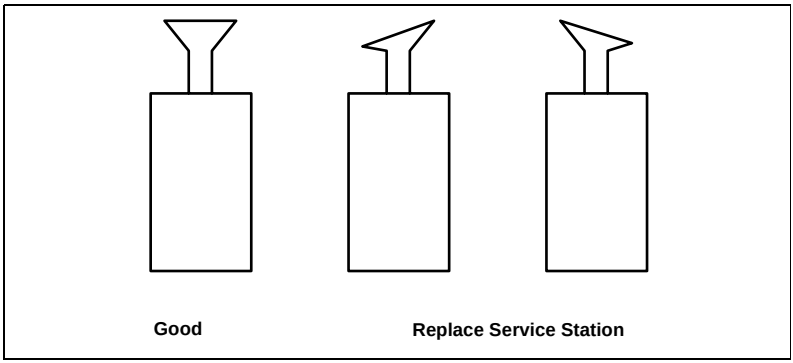
1 Select **Utility/Access Cartridges** to move the carriage away from the service station.
2 Raise the printer cover.
3 Locate the service station release tab at the right end of the service station base.
4 Move it gently to the left and lift to remove the entire service station assembly.



[27] Cleaning the service station

5 Rinse the service station and wipers with warm water. Use cotton swabs to clean small spaces.

6 Inspect the seals and wipers. Any damage to these parts can cause the cartridge jet plate to clog, resulting in misfires. Compare the wipers to the figure which follows.



[28] Comparing the wipers

7 Dry the service station and replace it, putting the left side in first. Make sure the release tab re-latches.

8 Press **Utility/Access Cartridge** to return the carriage to the service station.

Replacing the service station wipers

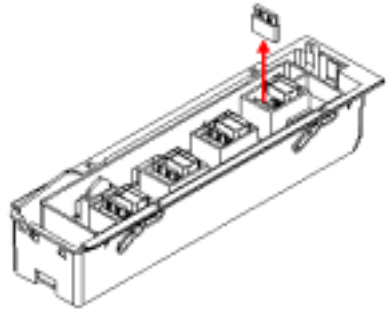
A well-maintained service station is an essential in achieving optimal print quality. Océ recommends that you replace the service station wipers every 150 plot hours. This is equivalent to the full lifetime of 2-3 cartridges. The printer tracks this information, which you can display through the **Utility menu/Display settings**.

The wiper assembly consists of the wiper, the wiper post, and a spring. Be careful not to break the wiper post while while changing the wipers. The replacement kit contains the necessary items to replace the post if it happens to break.

▼ **To replace the service station wipers**

1 Perform the procedure ‘Cleaning the service station’ on page 78.

2 Carefully pull on the wiper straight up until it comes completely off the wiper post, as shown below.

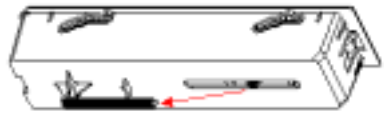


[29] Removing a wiper

3 Clean the post and the surrounding area. Use cotton swabs to clean small spaces.
4 Carefully insert the new wiper into the post. Ensure that you insert each wiper fully into the post, and that all four wipers are equal in height.
5 Install the service station back into the printer. Ensure that the locking tab snaps into place.

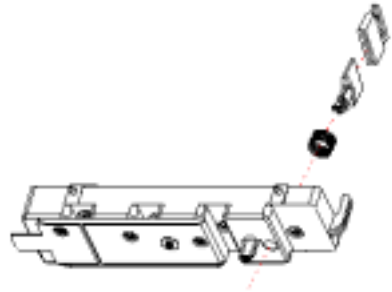
▼ **To replace the service station wiper post**

1 Release the spring on the bottom of the service station where it is connected to the inner assembly (sled). Remove the sled from the base of the service station.



[30] Removing the sled

2 Locate the broken post and pull it straight out.
3 Insert the new post with wiper and spring into the sled. Continue pressing on the post until the retaining locks on the post protrude from the bottom of the sled.
4 Return the sled into the service station. You will need to push down on the tab to get the sled completely into the base of the service station. The tab is located on the left side of the sled when it is installed in the base, and must go through the hole provided in the base.



[31] Replacing the sled

5 Reattach the spring to the sled.
6 Replace the service station into the printer. Ensure that the locking tab is snaps into place.

Cleaning the slide shaft

The slide shaft requires regular cleaning to prevent the deterioration of image quality and possibly a "carriage axis failure".

▼ **To clean the slide shaft**

1 Raise the printer cover.
2 With a lint-free cloth moistened with isopropyl alcohol, gently clean the entire slide shaft, both the top and bottom.
3 To clean the slide shaft area above the service station, press **Utility Menu/ Access Cartridges** to move the carriage out of the way.
4 After cleaning the area above the service station, press **Access Cartridges** to return the carriage into the service station.
5 Close the cover.

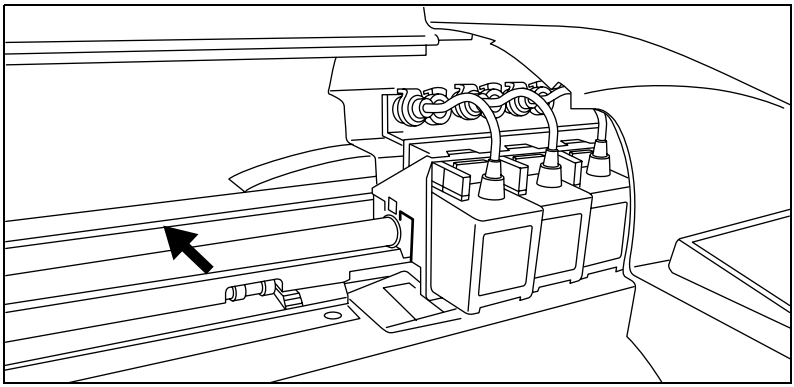
Cleaning the encoder strip

The encoder strip is an essential part of the printer. If it becomes dirty, it can cause various image quality problems. Clean regularly to maintain good image quality.

▼ **To clean the encoder strip**

1 Raise the printer cover.

2 Locate the encoder strip. The encoder strip is is a thin piece of plastic that is attached to a metal bar. This assembly is located just below the flex trailing cable support, and runs the entire width of the printable area.



[32] Cleaning the encoder strip

3 With a cotton swab moistened in isopropyl alcohol, gently clean the top and bottom of the encoder strip. Be sure to clean the entire length of the encoder strip.

4 Close the cover.

Attention: *Use extreme care not to bend or damage the encoder strip in any way. Any damage to the encoder strip can cause the printer not to operate properly.*

Note: *You can also use canned air to clean the encoder strip. This method will only be effective to remove lint and other dry materials. If ink or any liquid gets on the encoder strip, you must use the cotton swab method.*

Maintaining the Océ Prime tool

The Océ Prime tool is an accessory used to establish ink flow when you install new cartridges and reservoirs. It operates using four (4) AA batteries.

▼ **To replace the battery**

1 Remove the screw at the end of the unit and open the Océ Prime tool.

2 Note the orientation of the battery pack.

3 Remove old batteries and replace with new batteries.

▼ **To clean the Océ Prime tool**

1. Clean the Océ Prime tool (part that touches the cartridge) with distilled water and a lint-free cloth to remove ink.
2. Thoroughly wash the ink bottle and allow to air dry.

Transporting or storing your printer

Before removing your printer from service, do the following preparations:

- Remove the ink cartridges and store them in a sealed plastic bag, away from direct light and heat.
- Remove the ink reservoirs.
- Wash out the service station.

Accessing printer information

The printer can provide you with information on the following:

- Plot area
- Memory
- Calibration settings
- “On time” is the total time the machine has stayed powered on
- “Plot time” is the total time the machine has been printing
- Firmware version

Note: *The On time and the Plot time are resetable by Océ service.*

▼ **To access printer information**

1. Select **Utility/Print Settings or Utility/Display Settings**.
2. Press the button for the item for which you want information.
3. Press **OK**.

Chapter 6
Error handling and troubleshooting

This section is a guide for you to identify and solve problems that can arise in the course of printing.

Error handling

In case of error, the control panel displays the message 'Internal ERROR: Shutdown' with a specific message to explain the nature of the error.
If you cannot clear it, note the message and the sequence of events leading to the error, in order for Océ technical support personnel to assist you in solving the problem.

If the control panel displays a “Servo shutdown message”, turn the printer off and on again to clear the error.

If the control panel displays an “Unrecognized Cartridge(s)” message, the error originates from one of three problems:

- One or more non-CS 5050/5070 cartridges installed
- One or more incorrectly installed Océ cartridges
- One or more cartridges not installed

Unrecognised cartridge

If you use any other cartridges than Océ cartridges the message "unrecognised cartridge" appears. Also, incorrectly installed cartridges lead to the same error message due to poor electrical connections between the cartridge and the carriage unit.

▼ **To clear the error**

1. Press **Access Cartridges** to move the carriage to the position for replacement of the ink cartridges.
2. Check for the correct installation of CS 5050/5070 cartridges in each position.
3. Replace any non-standard cartridge with an Océ cartridge.
4. Press **OK**.

Note: *The printer can sometimes display a cartridge error even with an Océ cartridge. This may be due to a build-up of static electricity. Turn off the printer and unplug it from the outlet. Wait 10 seconds before you plug it back in and turn on the printer.*

Checking the quality of ink cartridges

Before printing and at regular intervals during printing, check the state and quality of the ink cartridges to make sure that they are in optimal working order.

Getting cartridge information

The Service menu gives you information about the state of the current cartridges, such as details about the type and ink colour in each stall, and the extent of cartridge wear, with changes displayed in millimeters (by 2 ml increments).

- At 500 ml, you should replace the cartridge
- At 1280 ml, the cartridges stops functioning

▼ **To get cartridge information**

1. From the **Utility** menu, press **Service** menu.
2. Press **Cartridge Info**.

Running the prime test

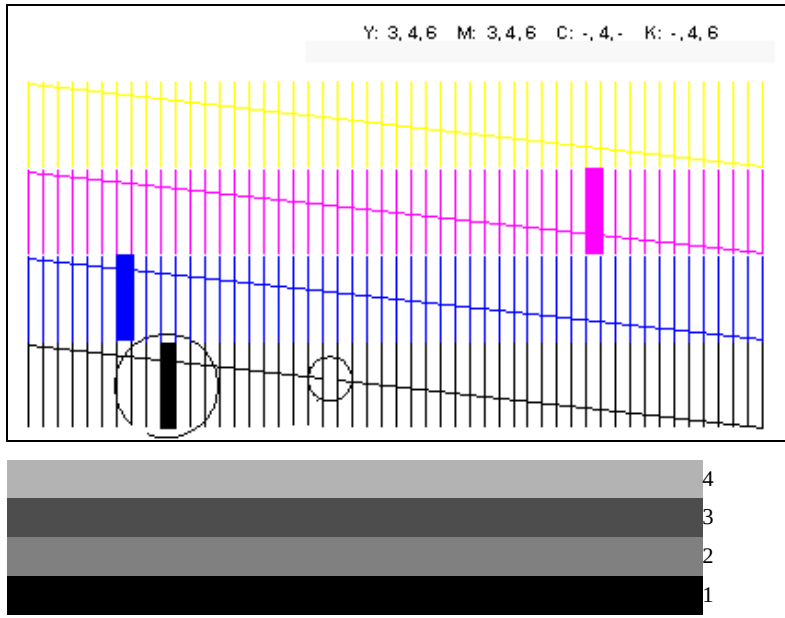
Running a prime test ensures that your cartridges print at optimal quality. This prime test gives detailed information about the state of the cartridges and suggest the approriate print mode to use when you must compensate for electronically damaged jets without losing quality during multi-pass printing. However, when the jets become clogged (due to prolonged exposure to air or disuse), you must clean them manually or compensate for them.

Océ recommends that you print this test daily to ensure the best possible print quality and solve related problems before printing.

▼ **To print the prime pattern**

1. With media loaded, press **Utility** menu
2. Select **Prime**.

A test pattern prints. The test pattern consists of four coloured bands (for black, cyan, magenta and yellow), a series of lines and a CMYK header, indicating the compensating print modes for damaged jets.



[33] The prime test

▼ **To interpret the prime test**

- The bands should be smooth, without dark streaks or white lines. The lines should not look fuzzy or contain gaps.
- Within the printed test pattern, each jet is represented by a short horizontal line. Together, these short horizontal lines form a “stair step” pattern.
- Electrically defective jets appear as solid bars which can be compensated.
- Clogged jets appear as gaps or misdirected lines in the “stair step” pattern, which you clear manually.
- The print modes for which compensation is available are shown above the test pattern.
- In the above example, the prime test shows that there are three electrically defective jets and one clogged jet. The header indicates that you can compensate for the electrically defective jets in the 4-pass mode. But you must clear the clogged jet manually. See ‘Clearing clogged jets’ on page 89 for further information.

Note: *If all jets appear to be defective, reinstall the cartridges.*

Compensating for electrically defective jets

▼ **To compensate for electrically defective jets**

1. Examine the printed test pattern.
   Each solid bar represents an electrically defective jet. The header indicates the print mode that can best compensate for the defective jets in each cartridge. The same print mode must be available for all four print cartridges in order to provide full compensation.
2. Press **Setup Menu**/**Print Mode Menu**/**Print Passes**.
3. Set the number of print passes by pressing the **Prev. Option** or **Next Option** to the appropriate setting.
   Note: *When printing to the Océ CS 5050/5070 using the Océ Graphics Server L, you should set the correct print mode in the Setup window of the Printer Setup dialog box (consult your Océ Graphics Server L Reference Manual).*
4. Press **OK**.
5. Press **Exit** to leave the menu.

Note: *If the detection of a failed jet appears to be inconsistent (i.e. failed jet moves from one position to another between primes), you should clean the electrical contacts on the flex driver cable (located behind each cartridge) and the cartridge electrical contacts using a lint-free cloth moistened with isopropyl alcohol. Check that the unit is powered off while cleaning the flex driver cables.*

Clearing clogged jets

A clogged jet appears in the prime pattern as a gap in the “stair-step pattern” for each cartridge. The printer does not automatically detect clogged jets, so you must clear them manually by cleaning and priming the cartridges.

▼ **To clear clogged jets**

1. Examine the printed test pattern.
2. Unsnap the ink cartridge which shows clogged jets from the carriage.
3. Prime the cartridge using the prime tool. To do so, attach the prime tool to the cartridge jet plate and prime cartridge with pulses by pressing the activation button repeatedly.

4 Clean the cartridge jet plate by blotting the jet plate with a distilled water/isopropyl saturated lint-free towel.
Note: *For severely clogged cartridges completely clean the jet plate thoroughly by immersing cartridge jet plate into ultrasonic cleaner for 30-40 seconds. As a final attempt, try immersing the jet plate into boiling water for 10-15 seconds.*
5 After cleaning, reinstall the cartridge.
6 Select **Utility Menu**/**Service Menu**/**Diagnostics** /**Colour Test** to clear water/chemicals from the jets.
7 Press **Prev. Option** to change the option '10 %' to '100 %'.
8 Press **OK** to start printing.
9 Rerun the prime pattern to verify whether the jet is cleared of ink clog. Try to eliminate all gaps in the "stair step" pattern prior to starting your print job.

If the printed results remain unsatisfactory, run the test several more times.

Compensating manually for clogged jets

In addition to the prime pattern, you can also print a jet status list which identifies for each colour the number of individual jets that are clogged. This enables you to enter manually the jet numbers (by cartridge colour) to initiate compensation for the clogged jets. The jet compensation data is stored on the cartridge chip.

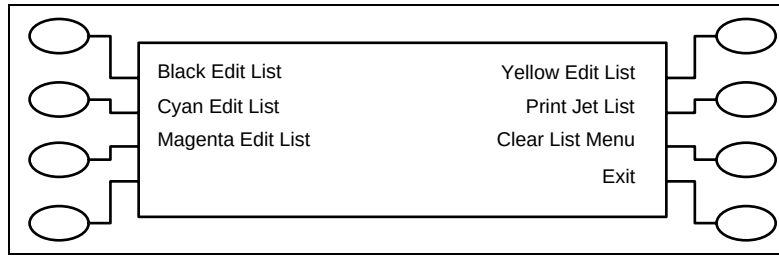
▼ **To print the manual jet compensation list**

1 From the main menu, select **Utility Menu**/**Service Menu**/**Calibration Menu**.
2 Select **Open Jet Menu**/**Print Jet list**. In the example below, the jet status list shows the current jet compensation by number for each cartridge.

Manual jet compensation list

Y:	None
M:	1, 3, 10
C:	None
K:	10, 21, 30, 128

3 To add a jet to the compensation list, press the button corresponding to the colour of cartridge where the jet is located.



4 To compensate for a specific jet, press **Next Previous** or **Prev. Option** until the panel displays the number of the jet.

5 Press **Toggle Jet** to switch the jet to **OFF**.

6 Repeat for any other jet for which you must compensate.

7 Press **OK** to validate the settings.

Note: *Once you have manually compensated for jets in any cartridge, remember to clear the compensation list when you install a new cartridge by pressing "Clear List Menu."*

Troubleshooting

Troubleshooting helps you locate the source of errors and fix common problems that can arise during printing. However, before you investigate, check:

- Is the printer connected to a working power source?

Troubleshooting areas

- Printer behavior
- Print quality
- Data transfer
- Application software

Isolating problems

You can quickly isolate problems in the printer, computer/printer interface, or application software using the following procedure:

▼ **To isolate problems**

1. Turn the printer **OFF**, then **ON**.
2. Load media, then print a prime test to check that all jets fire. (see ‘Checking the quality of ink cartridges’ on page 87)
3. Perform a colour calibration. (see ‘Printing a colour test’ on page 30)
   If your printer fails during any of the above steps, call the Océ helpdesk. Otherwise, continue with the following steps:
4. Send a test print directly to the printer through the parallel port. For example, on a PC, type:
   copy /b <filename>.rtl lpt1.
5. If your computer runs on a network, log on and copy the test file to the printer over the network.
6. If steps 4 or 5 fails, try again from another computer.
   If any of these steps fail, your printer may not be correctly connected to your computer and/or network. Contact your systems administrator. Otherwise, continue with the following steps:
7. Print directly to the CS 5050/5070 from several software applications.

8 If your computer is on a network, log on and print from several software applications.
9 If steps 7 or 8 fails, try again from another computer, or remove it from the network to test on a standalone basis.

- If one application fails, but others print successfully, the problem can originate from a specific software.
- If all applications fail to print, call Océ Service.

Printer behavior

Printer does not turn on

- Check that the power cord is securely attached to the printer and plugged into a working electrical outlet.
- Check that the power switch is on.

Display does not light up

- Check that the power cord is plugged in and the power switch is on.
- Push any control panel button. The display should light up.

File will not print

- Check the electrical connections.

Takeup roll does not turn

- Check that the paper feed option is set to “Takeup”.

Takeup roll does not stop turning

- Check that nothing blocks the take-up sensor (between the take-up sensor and media).

Automatic cutter does not work or tears the paper

- Make sure the Auto-Cut option is set to ON.
- Make sure Media Supply Type is set to Roll.
- Make sure the cutter is properly installed. (see ‘Installing the cutter’ on page 22)

▼ **To check cutter**

1. Turn off the power.
2. Clean the inside of the black belt using alcohol and a lint-free cloth.
3. Push the carriage back and forth to access all areas of the belt. Manually push the carriage completely to the left to force the cutter to drop.
4. Turn on the power.
5. Check that the service station lowers. If not, push it left and then down, in order to disengage the cutter.
6. If the cutter is worn, replace it. The cutter wear depends on the frequency of use and the type of media cut.

Carriage jams

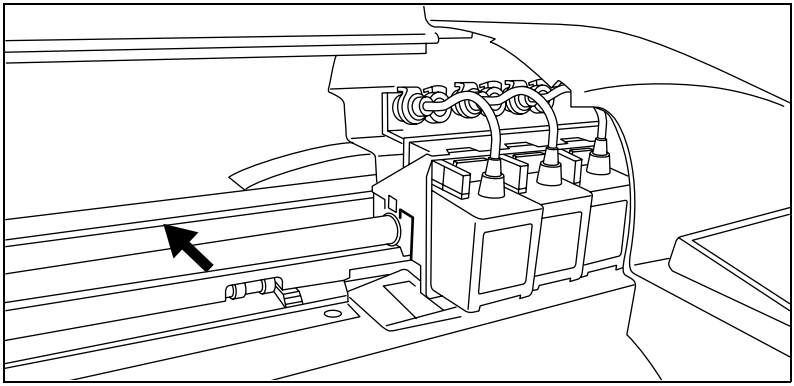
- Check for paper jams or blockage.

Carriage axis failure

- This may be caused by using matte paper which may curl and cause carriage axis failure. Be sure to use inkjet quality media.
- An obstruction in the path of the carriage assembly hindering the carriage movement, which you may or may not see.
- Other common causes include dirty encoder strip, media interference, worn carriage bushings, cutter malfunction, and loose trailing cable connection.

▼ **To check carriage axis**

1. If the carriage is in the same spot, check the encoder strip for visible damage (clear plastic strip under the trailing cable tray and above the belt). See the figure below:



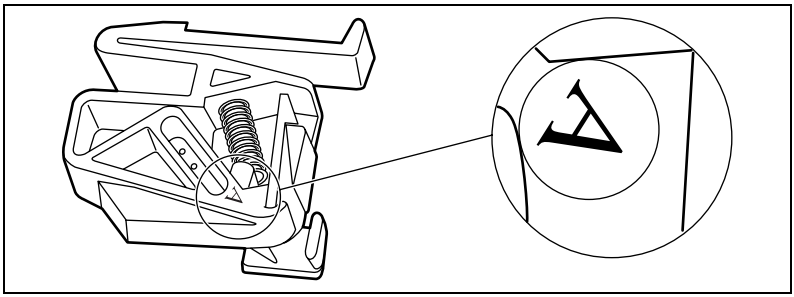
[34] Plastic strip under the trailing cable

2 Verify that carriage movement is free and smooth by turning the power off and moving the carriage from one end of the shaft to the other, with nothing binding or blocking the carriage movement.

Attention: *Make sure power is off before performing this step!*

3 Clean the top and bottom of the encoder strip using a cotton swab and distilled water. Let it dry completely for approximately 30 minutes before trying to operate the printer.

4 Remove the cutter from the left side of the carriage and check it for visible damage. Make sure cutter version A is installed (see the figure below).



[35] Cutter version A

5 Check the shaft for visible damage (carriage moves back and forth on it during operation).

6 Clean the shaft with a lint free cloth and isopropyl alcohol. Let it dry completely for approximately 30 minutes before trying to operate the printer.

7 Check the belt for visible damage such as fraying and pieces coming apart.

8 Check the trailing cable (cable that moves during printer operation) for visible damage.

9 Check whether the idler assembly (located at the left end of the belt) moves freely. Check for cracks or damage.

10 After you've checked the above items, reboot the printer.

Note: *If the error re-occurs, observe whether the carriage is in the same or different location.*

Cannot draw ink during initial siphon

- Check that the quick release fitting connection to the ink reservoir is secure.
- Check whether contaminants have blocked the ink delivery lines. If necessary, flush the lines with distilled water, then reprime.

Initial siphon cannot be established

- Check that ink reservoirs are full.
- Check the ink delivery system for leaks in the lines, at the tubing connection, and at the quick connect coupling to the reservoir. If leaks cannot be stopped, call Technical Support.

Ink cartridges do not fire properly

- Clean cartridges and the service station periodically to maintain good print quality (see 'Cleaning the ink cartridge jet plate' on page 77).
- Cartridges wear out after extended use. Replace the cartridge.
- Store cartridges in a sealed container at room temperature when not in use for extended periods of time.
- Make sure you have removed the protective tape from the cartridges.
- Remove the cartridge and reinstall it, or clean the electrical contact on the cartridge and carriage. Check that it is clean and dry, and properly installed (see 'Installing ink cartridges' on page 25).
- Check that ink goes through the delivery lines. If necessary, use the Océ Prime tool to force ink out of the nozzle plate and remove trapped air bubbles.
- Check that the ink reservoirs are filled.

Cartridges leak

- Check that reservoirs are not overfilled.

Various nozzles are clogged or stop firing

- Repeat prime several times.
- Remove, clean, and re-install cartridge; repeat prime. Do not use alcohol on the jet area.
- Clean service station; clean cartridge again; repeat prime.
- Clean cartridge electrical contacts using a cotton swab moistened with water. Dry contact. Repeat prime. Do not use acetone or any other harsh cleaner as this may cause damage to the flex cable.
- Nozzle may have failed. Replace cartridge. Check for nozzle clogs by using the suction bulb on the cartridge nozzle plate.
- Check to see whether spray from printing has contaminated the flex contact. Remove the cartridge and wipe the carrier flex and cartridge flex with a cotton swab dipped in alcohol.
- Run prime. If sections of the print are missing, replace the cartridge.

Ink spills on the flex cable

- Clean the flex cable gently with a cotton swab moistened with water. Do not use acetone or any other harsh cleaner as this may cause damage to the flex cable.

Printer settings are lost when printer is turned off or rebooted

- Be sure to save your printer settings to a User number (see ‘Saving user options’ on page 61). When you are ready to print, select the User number with the settings that you saved.

Print quality

You can solve most print quality problems by priming, cleaning, replacing, or calibrating the cartridges. Refer to the following chapters for details:

Priming, calibrating - (see ‘Getting started’ on page 15)

Cleaning, replacing - (see ‘Printer maintenance and storage’ on page 69)

No print appears

- Check that you’ve removed the tape from the cartridge printhead.
- Check that the software (OGSL) is working properly.
- Check for network problems.

White lines or large gaps on print or portions of characters missing

- Prime, clean, calibrate, or replace cartridges.
- Check if the ink reservoir is empty. Refill if necessary.
- Make sure the media feeds freely.

Overall print quality is poor

- Prime, clean, calibrate, or replace cartridges.
- Make sure the printer is positioned on level ground.

Cartridge sputters small amounts of ink on paper

- Nozzle plate may be flooded. Try using a lower firing rate or replacing the cartridge.

Streak marks

- Clean the service station at least once a week, depending on the printing frequency (see ‘Printer maintenance and storage’ on page 69).
- Prime, clean, calibrate, or replace cartridges.

Line drawings bleed

- Be sure you are printing on the coated side of the media. Load cut sheet media so that the notch is on the side closest to the carriage. Load roll feed media so the coated side is on the outside.
- If your application software permits, use gamma correction to lighten colours.
- Too much air may have been drawn into the cartridge during extended operation. Add 5 ml of ink and reinstall the cartridge.

Colours print as monochrome

- Check that you have set the Colour/Mono mode to Colour. To change a specific drawing from monochrome to colour or vice versa, you must switch the Colour/Mono setting and re-send the file.

Ink smears after removing the print

- Check that the ink is dry before removing the print. If you are printing area fills, set the Dry Time option (see ‘Setting the dry time’ on page 59). Turn the dryer on.

Smudged or dark characters

- Check that you are using the correct type of paper for the application.
- Check that the paper is straight and unwrinkled when loading it into the printer.
- Prime, clean, calibrate, or replace cartridges.
- Try a different print mode.

Improperly formed or misaligned characters

- Calibrate cartridges.

Colour problems or shadowing

- Calibrate cartridges.

Colours are not correct or sections of print missing

- Prime, clean, calibrate, or replace cartridges.

Image is the wrong size

- Check that the dpi setting (300 or 600) matches the size of your image file.

Print only contains a partial image

- Check the settings of the margins option. When you set margins to Normal (default), the print area is smaller than with the margins set to Expanded.
- The printer did not size correctly the media. Use the Manual load option to load your media.
- The printer automatically prints in portrait orientation. If you rotated the image in the software to save to save paper, set the paper size to the next larger size (i.e. for a C size image, select D size paper). Set the Save media option to ON to stop the printer from scrolling the full paper height.

Ghosting (parasitic suppression)

- Use the preheat function and set the heat to 4 on all cartridges (Setup/Ink preheat/Cyan, Magenta, Yellow, Black preheat/4/OK)
- Set the carriage speed to 5 or lower (Setup/Print mode/Carriage speed/5/OK)
- Set the printer in the bi-directional mode (Setup/Print mode/Print direction/BI/OK)

Jagged vertical lines

- Prime, clean, calibrate, or replace cartridges.

Splotchy area fill

- Try using photo mode. If the problem persists, prime, clean, calibrate, or replace cartridges.

Excessive banding in area fills

- Consistent banding generally indicates a hardware problem; whereas inconsistent banding indicates a software problem.
- Use specially coated inkjet media.
- Change the Print Mode option to User-defined and select a higher number of print passes (see ‘Selecting quality modes’ on page 44).
- Prime, clean, calibrate, or replace cartridges.
- Set wiper function to off.

Portions of lines are missing

- Prime, clean, calibrate, or replace cartridges.
- Clean service station; clean cartridge again; repeat prime.
- Clean carriage flex cable and cartridge electrical contacts; repeat prime. Do not use alcohol, acetone, or other cleansers. Use a cotton swab moistened in distilled water. Use tap water if distilled water is not available.

Poor vertical or horizontal line quality

- Perform colour calibration (see ‘Calibrating cartridges’ on page 33).

Data transfer

Printer does not generate a print

- Check that your printer is connected to the port to which you are sending the file.
- If you are printing over a network, determine whether the problem comes from the network. Try connecting the printer directly to your computer and send the file again.

Parallel printing doesn’t work

- Try using another parallel cable. Check that it is securely connected.

Application software

Isolating a software problem

- Try printing the “Demo Plot” on the Utilities disk. If this prints, the printer’s health is probably good.
- Try printing a simple file from your application or from another application. If this prints correctly, the problem may be with your use of software.

Difficulty in generating prints ranging from A to E size

- Many Windows applications limit the maximum print size to “C” or “D” size due to the way that they map their internal coordinate system to memory.

Calling for assistance

If you have tried the suggestions listed previously, and still require assistance, please contact your Océ service representative.

Before you call for assistance, please have the following information handy:

Printer information

- Model
- Firmware
- Revision (letter)
- Memory
- Serial number

Computer information

- Model
- Operation system
- Connection (serial or parallel)
- Software name and version

Appendix A Glossary

baud rate The rate of data transfer (bits per second between the computer and printer.

bit The smallest unit of digital information used by a computer or printer.

buffer The part of the printer's memory that is used for receiving and processing plot files.

calibration The procedures to adjust the ink cartridge alignment and line length accuracy.

carriage axis The plot area measured parallel to the platen.

Centronics A standard parallel interface.

configuration The way that the computer and printer are connected.

dpi Dots per inch (dpi), the number of dots the printer lays down in an inch.

handshake A method the computer and printer use to communicate.

inkjet The nozzle part of the ink cartridge.

interface cable The cable used to connect the printer to the computer. Océ printers use a serial or parallel interface cable.

media The surface on which the printer prints the image. Media comes in a variety of types, including paper, polyester, canvas, and film.

monochrome An image that is printed in only one colour (usually black).

orientation The direction of the plotted image on the page.

palette The available colours for the printer.

paper axis The long side of the plot area measured at right angles to the platen.

parallel interface An interface type in which all bytes are transferred simultaneously, making it faster than a serial interface.

parity A method for checking the transfer of information between the computer and printer.

platen The surface on which media is placed to print.

plot area The area in which the printer prints the image, determined by the width of the media.

prime To clear the ink cartridges by forcing them to fire rapidly. Also, to fill the ink lines with ink.

raster image A graphic created by dots called bitmaps.

resolution The sharpness of a printed image as measured by dots per inch.

roll feed Media that is packaged on a roll and is loaded and fed through the back of the printer.

vector A graphic created by geometric lines. HP-GL and HP-GL/2 files are vector files.

Appendix B
Supplies

Caring for inks and media

Follow these recommendations when handling inks, cartridges, and media for best results.

Inks and ink cartridges

- Each of the four cartridges and the ink reservoirs must contain the same type of ink.
- Do not mix inks.
- Do not shake ink refill containers.
- Store ink and cartridges in the same environment as the printer whenever possible.
- Removing a cartridge may result in loss of negative pressure and cause it to leak through the jet plate. If you remove a cartridge from the printer, do not leave it exposed to the air for an extended period because the jets may clog. Replace the original tape on the jet plate. Place the cartridge in a cartridge garage or a sealed plastic bag and store it at room temperature and out of direct sunlight.
- Open new cartridges only when you are ready to install them.
- Use only Océ brand ink refills and cartridges.
- Connect cartridges to reservoirs which contain the same colour and ink type as the cartridge.
- Drawings using both black and colour elements must have aligned cartridges (see ‘Calibrating cartridges’ on page 33).

Attention: *Handle cartridges only on the plastic areas. Touching the copper electrical interconnect or the inkjets can damage the cartridge.*

Caring for your media

For best results, follow these instructions when handling media:

- Store media in its original packaging in a cool, dry area until you are ready to use it.
- The environment should be stable (no extremes of heat or cold, or non-condensing humidity.) If temperature conditions are outside the recommended range for printer operation, allow the media to acclimate in the operating environment for at least 48 hours before use.
- If you remove a roll of media from the printer, store it in such a way as to keep it clean and dust-free. Ideally, you should return it to its original packaging for storage.
- Print on the correct side. Cut sheet media has an ink-receptive side and a non-ink-receptive side. The sheets are notched to help you orient them correctly. To identify the correct side, make sure the notch is in the upper right corner when you feed the sheet through the printer.
- Handle the media carefully to avoid creases, scrapes, and tears. Avoid crushing or damaging of roll media edges.

Attention: *Wear gloves! Film-based and photographic paper-based media are very sensitive to scratches and creases, and may absorb skin oils. Fingerprints on the media before printing may result in visible fingerprints after ink is applied.*

Inks for Océ CS 5050/5070 printers

Océ develops its inks and media to work together in order to produce optimal results from your printer. Use only inks and ink cartridges specific to the Océ CS 5050/5070 printer model. Use outdoor inks with Outdoor media.

Océ Standard Colour Inks accessory kits

Standard Colour Inks accessory kit	Colour	Article number
Océ CS 5050/5070 Standard Colour Ink	Cyan	29953500
Océ CS 5050/5070 Standard Colour Ink	Magenta	29953501
Océ CS 5050/5070 Standard Colour Ink	Yellow	29953502
Océ CS 5050/5070 Standard Colour Ink	Black	29953503

Océ Standard Colour Inks replacement cartridges

Standard Colour replacement cartridges	Colour	Article number
Océ CS 5050/5070 Standard Colour Ink	Cyan	29953508
Océ CS 5050/5070 Standard Colour Ink	Magenta	29953509
Océ CS 5050/5070 Standard Colour Ink	Yellow	29953510
Océ CS 5050/5070 Standard Colour Ink	Black	29953511

Océ Outdoor Inks accessory kits

Outdoor Colour Inks accessory kit	Colour	Article number
Océ CS 5050/5070 Outdoor Colour Ink	Cyan	29953504
Océ CS 5050/5070 Outdoor Colour Ink	Magenta	29953505
Océ CS 5050/5070 Outdoor Colour Ink	Yellow	29953506
Océ CS 5050/5070 Outdoor Colour Ink	Black	29953507

Océ Outdoor Colour Inks replacement cartridges

Outdoor Colour replacement cartridges	Colour	Article number
Océ CS 5050/5070 Outdoor Colour Ink	Cyan	29953512
Océ CS 5050/5070 Outdoor Colour Ink	Magenta	29953513
Océ CS 5050/5070 Outdoor Colour Ink	Yellow	29953514
Océ CS 5050/5070 Outdoor Colour Ink	Black	29953515

Media for Océ CS 5050/5070 printers

Océ offers a full line of inkjet media adapted to the Océ CS 5050/5070 to give bright and crisp colours from your printer in a variety of sizes.

Océ constantly develops and tests new media to meet printing needs. For precise ordering details, contact your customer service representative.

Paper type	Description	Suggested application
Photo paper	■ glossy and satin ■ ranging from 160 g/m² to 240 g/m² ■ top quality papers with PE layer	■ posters ■ displays ■ floor graphics
Various paper	■ ranging from 90 g/m² to 170 g/m² ■ paper-based media, no PE layer	■ check prints ■ glare-free presentations ■ imposition proofs
Backlit films	■ Backlit 135 µm Back Print and 185 µm Front Print option ■ translucent film	■ backlit displays ■ light box signs ■ trade show displays
Clear films	■ very clear film from 110 to 120 µm ■ with or without adhesive layer	■ presentation overlays
Ultra White films	■ ultra white film from 110 to 120 µm ■ with or without adhesive layer	■ signs and posters ■ durable prints
Outdoor media	■ ranging from outdoor banners to outdoor tyvek ■ with or without adhesive layer	■ banners ■ outdoor signs
Specialties	■ ranging from drop-flame retardancy banners to silver metallic films ■ with or without adhesive layer	■ flame-retardant banners ■ prestigious advertisements ■ canvas for artistic reproductions

Miscellaneous Océ CS 5050/5070 accessories

Article	Reference number
Cutter blades (5 per pack)	310571465
Ink Reservoir Assembly Blue	310571468
Ink Reservoir Assembly Gray	310571469
Cartridge Tube Assembly Blue	310571470
Cartridge Tube Assembly Gray	310571471
Service Station Assembly	310571474
Print Head Garage for CS 5050/5070 cartridge	29953516

Appendix C
Technical specifications

Océ 5350-600 printer specifications

Media types	Photo paper, matte paper, drafting films, specialty paper
Media roll parameters	Inner roll core: 2” and 3” Maximum outside roll diameter: 4” and 6” Maximum roll width: 60”, 42”, 54” (photo gloss, vinyl and matte only), 50”, 36”, 24”
Resolution	600 x 600 dpi 300 x 300 dpi adressable
Standard features	Rollfeed with cutter Power feed with take-up 8 user defined and saved settings Power PC 33 MHX processor 500 ml ink reservoirs Two sets of ink lines Ink priming system
Line length accuracy	+/-0.2% in paper and carriage axis using rollfeed, 4 mil drafting film Image frame length (X-axis) +/-0.2% and width (Y-axis) variation +/- 0.06% (+/-0.024”, 0.6mm)
Buffer	Two 72-pin, 32-bit wide DRAM sockets, 35 MB, user upgradable to 128 MB, 70 ns or faster
Interfaces	Bidirectional parallel (IEE 1284), RS-422/232 422 to 9 pin 232 for self-service, optional 10 Base T, 10 Base T
Baud rates	9600, 19200, 38400
Power Consumption	90-246 VAC 47-63 Hz 20W idle, 185W typical, 285W maximum
Operating environment	59° - 95°F (15° - 35°C), 10-70% RH non condensing
Storage environment	-5° -140°F (21° - 60°C), RH 5-80% non condensing

Certifications	
Safety	CSA, CSE/NRTL (equivalent to UL 1950) TUV GS EN 50 082-1 EN 60 950 UL 1950 NOM-019-SCFI-1993 IEC 950 AS/NZS 3260
EMI	FCC Class A, B CSA C108.8 EN 55 022 Class A, B CE Mark CISPR 22-Class A, B AS/NZS 3548

Appendix D
Safety information

Instructions for safe use

Océ designed and tested products in accordance with the strictest international safety standards. To ensure safety when working with these products, it is important that you observe the following safety rules:

Maintenance
- Do not remove any screws from fixed panels.
- Do not carry out maintenance activities except for the parts and maintenance materials mentioned in this manual.
- Do not place any liquids on the machine.
- Use maintenance materials or other materials for their original purpose only. Keep maintenance materials away from children.
- Do not mix cleaning fluids or other substances.
- To avoid the risk of introducing hazards, all modifications to Océ equipment are strictly reserved to properly qualified and trained service technicians.

Connection
- If for some reason you have to move the machine yourself, please make sure that the mains power point has the right fuse capacity. See the Océ CS 5050/5070 safety data sheet in this appendix for information about maximum current.
- Do not bridge any mechanical or electrical circuit breakers.
- Do not use an extension lead to connect the machine.
- This equipment has not been designed for connection to an IT power system. (An IT power system is a voltage network in which the neutral wire is not connected to earth).
- For equipment connected via a wall socket: locate the machine close to a wall socket that is easily accessible.
- For equipment connected via a fixed connection to the electricity grid: the disconnect device in the fixed connection should be easily accessible.

Surroundings
- Do not block the ventilation openings of the machine.
- Ensure that the machine is placed on a level, horizontal surface of sufficient strength. See the Océ CS 5050/5070 safety data sheet in this appendix for information about the weight of the equipment.
- Ensure there is sufficient space around the machine. This facilitates reloading materials as well as maintenance.
- Do not place the machine in rooms which are subject to excessive vibration.
- Do not place the machine in rooms which are too small and insufficiently ventilated. See the Océ CS 5050/5070 safety data sheet in this appendix for information about space and ventilation requirements.

General

- Always use materials recommended by Océ and developed for this Océ machine. Materials not approved by Océ may result in faults in your machine.
- Do not use the machine when it is emitting unusual sounds. Remove the plug from the power socket or switch off the fixed connection to the electricity grid and contact Customer Service.

Safety data sheets

The disclaimer below is valid for all safety data sheets in this manual.
For questions about Océ products regarding health, safety and environment, please contact your Océ organisation; you can find the address in the last appendix of this manual.

Disclaimer The safety data sheets in this manual have been compiled to the best of our knowledge as a compact guide to safe handling of this product. We reserve the right to revise safety data sheets as new information becomes available. It is the user's responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary and to contact the company to make sure that the sheet is the latest one issued. If and in so far as limitation of liability is permitted under the applicable laws, we do not accept liability for any inaccuracy that may occur in this information.

Note: *Not all safety data sheets were available at the moment this manual was published. The Océ organisation in your country will be pleased to send you a copy of the missing sheets. You can find the address of the Océ organisation in your country in the last appendix of this manual.*

Appendix E
Miscellaneous

Notation conventions

There are a number of notation conventions used in this manual. This consistent style enables you to quickly become conversant with the use of this manual and consequently the Océ CS 5050/5070.

Description Each section or subsection contains a description of the feature or operation identified in the title. It might also include possible applications, as well as any guidelines that you should bear in mind.

Procedures A description is followed by a procedure. A procedure always begins with a phrase which briefly describes the procedure, followed by a series of numbered steps that take you, step by step, through all phases of performing the operation.

Figures and tables Figures and tables are titled and numbered sequentially throughout this manual. Figures include pictures of product components, screendumps, examples, and diagrams of concepts discussed in the description.

Attention getters There are several types of information to which we draw your attention. This information is classified as follows:

Note: *In a 'Note', information is given about matters which ensure the proper functioning of the machine or application, but useful advice concerning its operation may also be given.*

Attention: *The information that follows 'Attention' is given to prevent something (your copy or original, the copier or printer, data files etc.) being damaged.*

Caution: *The information that follows 'Caution' is given to prevent you suffering personal injury.*

Reader’s comment sheet

Have you found this manual to be accurate?
- ❑ Yes
- ❑ No

Could you operate the product after reading this manual?
- ❑ Yes
- ❑ No

Does this manual provide enough background information?
- ❑ Yes
- ❑ No

Is the format of this manual convenient in size, readability and arrangement (page layout, chapter order, etc.)?
- ❑ Yes
- ❑ No

Could you find the information you were looking for?
- ❑ Always
- ❑ Most of the times
- ❑ Sometimes
- ❑ Not at all

What did you use to find the required information?
- ❑ Table of contents
- ❑ Index

Are you satisfied with this manual?
- ❑ Yes
- ❑ No

Thank you for evaluating this manual.
If you have other comments or concerns, please explain or suggest improvements overleaf or on a separate sheet.

2938.560

Comments:

Date:

This reader's comment sheet is completed by:
(If you prefer to remain unknown, please do fill in your occupation)

Name:

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Company:

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Address:

City:

Country:

Please return this sheet to:

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